

# Development of Industrial Districts in China and its Implications

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## 1.1 Research Background on Industrial Districts in Non-Urban Areas

Since economic reform and opening to the outside world, China has been industrializing at a rapid pace. From 1978 to 2005, the average national GDP growth rate was 9.4%, far higher than the world average. The contribution of export processing trade to economic growth grew from 6% in 1981 to 38% in 1990 and rose further reaching 49% in 2005. Currently, China is the leading global exporter in 774 items and was ranked among the top five exporting countries for 1,972 other items (Yang et al. 2006). However, this explosive growth, at least until recently, has been driven primarily by the low wage manufacturing of consumer goods. Many Chinese factories have only provided OEM products for the “big buyers”, but have not yet established a position on international markets for innovative and high-value-added products.

Pervasive manufacture clustering is happening in China in the sectors of apparel, footwear, furniture, TV sets, home electrical appliances, toys, motorcycles, and the like, most of which are labour-intensive. People are looking for the real story behind China's "weapons of mass production", as the newspapers describe them as the “niche cities”:

‘Buyers from New York to Tokyo want to be able to buy 500,000 pairs of socks all at once, or 300,000 neckties, 100,000 children's jackets, or 50,000 size 36B bras.’  
‘Increasingly, the places that best accommodate orders are China's giant new specialty cities.’ ‘The niche cities reflect China's ability to form ‘lump’ economies, where clusters or networks of businesses feed off each other, building technologies and enjoying the benefits of concentrated support centres.’(Barboza, 2004)

The extreme diversity among China’s disparate regions adds a geographic dimension to the process of capability building (Rawski, 2005). Foreign investment, industrial exports, and expansion of manufacturing capability all concentrate in China’s dynamic coastal areas, creating numerous industrial districts largely in provinces such as Guangdong, Zhejiang, Jiangsu and Fujian.

The industrial district is a theoretical concept in regional studies. Even in the late 19 century, Marshall (1890) applied the concepts of externalities and industrial district to explain the phenomena of clusters of small and medium enterprises in England. The concept of industrial district was employed to describe the thriving local development witnessed in the Middle and Northeast Italy, so-called the Third Italy, in the 1980s (Becattini 1990). Contrasted with the stagnation in the Southern Italy (‘the Second Italy’) and a recession in the Northern Italy (‘the First Italy’), industrial districts in the Third Italy were able to establish strong positions in the

world markets in a number of traditional products, such as shoes, furniture, tiles, and musical instruments.

Industrial districts are local production systems with an active co-presence of people and of a primary industry consisting of small and independent firms specializing in the different phases of a single production process (Sforzi, 1999). Humphry (1995) summarized the attributes of industrial districts as follows based on the Italian model: geographical proximity of related firms, sectoral specialization, predominance of small and medium sized firms, close inter-firm collaboration, inter-firm competition based on innovation, a socio-cultural identity which facilitates trust, active self-help organizations, and a supportive regional and municipal government.

Evidence suggests that industrial districts are common in developing economies, but they are in the “low road” and are based upon the flexible labor market and cost-reduction strategy. Although it may be embedded in exceptionally social, cultural and economic context, the Italian model of industrial districts might provide experiences for the high-load development of industrial districts based on innovation in the development countries.

In a debate on the Italian model of industrial districts, Markusen (1996) rejected the dominance of the Marshallian industrial districts in regional development. She identified three additional types of industrial districts, that is, the hub-and-spoke industrial district; the satellite platform; and the state-anchored district. The industrial districts in China’s non-urban areas in this chapter refer to the Marshallian industrial districts or the Italian model of industrial district. In other part of this research refers also to the concept of cluster or other similar concept.

## **1.2 Study Areas**

The research project of “New Roles of Industrial Districts in China and Italy” will investigate industrial districts in China’s non-urban areas in 15 provinces, which include Guangdong, Zhejiang, Fujian, Jiangsu, Shandong, Liaoning, Heilongjiang, Jiangxi, Hunan, Hubei, Henan, Hebei, Shaanxi, Sichuan and Anhui. According to the editors of *China Industrial Clusters*, the 15 selected provinces host more than 90% of industrial districts in China. This project will provide a thorough investigation for industrial districts in 8 provinces, which are the coastal provinces of Jiangsu, Zhejiang, Fujian, Guangdong, Hebei and Shandong, and the inland provinces of Jiangxi and Sichuan. There are 438 industrial districts in these 8 provinces, accounting for 81.72% of total number of industrial districts in the selected 15 provinces. This project will also provide some general facts on industrial districts in the left 7 provinces, which have 98 industrial districts.

## **1.3 Overview of Industrial Districts in China**

### **1.3.1 Geographical Distribution**

Industrial districts are unevenly distributed among the 15 selected provinces and are mainly concentrated in large provinces in terms of economic size. A larger number of industrial districts are associated with higher GDP (Figure 1 and Table 1). Zhejiang province hosts some 136 industrial districts, followed by Guangdong, Jiangsu and Shandong, with 73, 70 and 54 of industrial districts, respectively. With poor economic performance and laggard behind in economic reforms, inland provinces such as Anhui and Shaanxi only have a few industrial

districts.

(Figure 1 is about here.)

**Tab.1 Industrial Districts and GDP in Provinces Investigated (Key Provinces)**

Key Provinces	GDP (100 million Yuan)	Small-sized Enterprises(unit)	Number of Industrial Districts	Employment in small-sized enterprises(person)	Total Population in 2005 (million)	Area(10,000 square kilometers)
Guangdong	22367	230474	73	6376904	92.48	18.6
Shandong	18517	177407	53	5001380	91.94	15.3
Jiangsu	18306	270669	70	6563781	74.75	10.26
Zhejiang	13438	241220	136	5705517	48.98	10.18
Hebei	10196	87605	37	2696972	68.51	19
Sichuan	7385	75330	15	2138436	82.12	48.8
Fujian	6569	77230	45	2151462	35.35	12
Jiangxi	4057	43605	9	1424390	43.11	16.66
<b>Above Total</b>	100835	1203540	438	32058842	537.24	150.8
<b>Share of total</b>	68.58%	71.60%	81.72%	70.40%	57.75%	49.75%

Sources: GDP data are collected from China Statistical Yearbook 2006; information on the number of industrial districts is from the author's collections

**Tab.2 Industrial Districts and GDP in Provinces Investigated (Other Provinces)**

Other Provinces	GDP (100 million Yuan)	Small-sized Enterprises(unit)	Number of Industrial Districts	Employment in small-sized enterprises(person)	Total Population in 2005 (million)	Area(10,000 square kilometers)
Henan	10587	110182	25	3566630	93.80	16.7
Liaoning	8009	110081	7	2323698	42.21	14.57
Hubei	6520	51682	24	1621358	57.10	18.74
Hunan	6511	57720	25	2004921	63.26	21
Heilongjiang	5511	40790	6	1027397	38.20	46.9
Anhui	5375	59902	7	1758246	61.20	13.9
Shaanxi	3676	45906	4	1173463	37.20	20.5
<b>Above Total</b>	46189	476263	98	13475713	392.97	152.31
<b>Share of total</b>	31.42%	28.40%	18.28%	29.60%	42.25%	50.25%

Sources: GDP data are collected from China Statistical Yearbook 2006; information on the number of industrial districts is from the author's collections

### 1.3.2 Size Distribution

Among the 536 industrial districts in the 15 provinces, each industrial district on average has

about 923 enterprises, with sales revenue of 5 billion Yuan and 51883 workers<sup>1</sup>. Size however differs significantly across industrial districts. In terms of the number of enterprises, the smaller industrial districts only have a dozen of enterprises in the leather industrial district in Xiangtan, Hunan province. The larger one could have more than 10 thousands of enterprises in the cluster of textiles in Jieyang, Guangdong province. The employments in industrial districts range from several hundreds of workers in the ceramic industrial district in Zibo, Shandong province, to several hundreds of thousands of workers in the furniture cluster in Quanzhou, Fujian province. The gross output of the Chinese industrial districts also varies from 100 million Yuan of the honeysuckle cluster in Shaoyang, Hunan province, to 30-40 billion Yuan of shoes-making clusters in Wenzhou, Zhejiang province.

### **1.3.3 Rapid Growth**

Industrial districts in China have grown rapidly during the period of transition. First, the number of industrial districts has soared up during the last decades. Now, some 536 industrial districts can be identified in the 15 selected provinces. Second, the number of enterprises in industrial districts has expanded quickly. During the transition from the commanding economy to a market-oriented economy, market forces have largely driven the development of industrial districts in China. Following the pioneers, new enterprises have grown rapidly through learning by doing and by imitating, facilitating the development of industrial districts. In 2000, there were 1.8 million privately owned enterprises in China and the number in 2005 climbed up to 4.3 million<sup>2</sup>, a considerable proportion of which started and grew up in industry districts. Third, industrial outputs from industrial districts have experienced remarkable growth. Industrial districts produce nearly half of GDP in provinces like Zhejiang, Guangdong and Jiangsu.

The development of household appliances in Shunde, Guangdong province, illustrates the spectacular growth of industrial districts in China. In the 1990s, there were only several collectively owned enterprises in Shunde. At that time, Midea, a current famous air condition maker in China, was just a collectively-owned firm producing plastic caps; Kelon, a giant of refrigerator-manufacturer, was a small component and part supplier for refrigerator manufacturers, and Galanz, a world-famous producer of microwave oven, was a down outwear producer. Currently, the annual industrial output of household appliances in Shunde reached 80 billion Yuan, with total employment of more than 300 thousands in some 3000 enterprises, among which Midea, Kelon and Galanz are the national or international branded manufacturers of appliances.

With the further integration with the global economy, China saw faster growth of industrial districts. Figure 2 shows the number of pairs of leather shoes produced in Wenzhou since 1998. From 1998 to 2001, leather shoes in Wenzhou steadily and moderately increased up to 150 million pairs. Production of leather shoes in Wenzhou has experienced exponent expansion since 2002. By 2005, Wenzhou produced 460 million pairs of leather shoes.

(Figure 2 is about here)

### **1.3.4 Sector Distribution**

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<sup>1</sup> For the limit of data on industry districts, our collection ranges from 1999 to 2006 through reports, government documents, etc.

<sup>2</sup> China Private Economy Yearbook 2006, China Industry and Commerce Association Press, 2007.

The distribution of the 536 industrial districts in the 15 provinces is present in Table 2. There are 87 industrial districts in textiles, mainly located in Zhejiang and Jiangsu provinces, with 23 and 21 industrial districts, respectively. Garments and other fiber products rank the second, with 46 industrial districts, among which 18 are in Guangdong and 11 in Zhejiang. Textile and garments make up 25 percent of industrial districts in China.

Industrial districts in the industry of nonmetal mineral products produce ceramics, building materials and glass products and are widely distributed across the country, particularly in Shandong, Hebei, Fujian and Guangdong provinces. There are 38 industrial districts specializing in equipment for special purposes, specifically equipments used for mould making, textiles, and food processing. They are mainly agglomerated in Zhejiang and Jiangsu. Industry of metal mineral products has 32 industrial clusters largely in Guangdong, Zhejiang and Jiangsu provinces. Industries of food processing, other manufacturing, leather fur down products, transport equipment, electric machinery and equipment and general purpose machinery each have some 20-30 industrial districts in the 15 provinces. Agriculture, chemical materials and products, timber processing are also important industries for industrial districts.

Tab.3 Industrial Distribution of Industrial Districts in China

<b>Industry</b>	<b>Number of Industrial Districts</b>	<b>Share (%)</b>
Textiles	87	16.2
Garments and Other Fiber Products	46	8.6
Nonmetal Mineral Products	39	7.3
Equipment for Special Purposes	38	7.1
Metal Mineral Products	32	6.0
Food Processing	29	5.4
Other Manufacturing	27	5.0
Leather, Fur, Down and Related Products	23	4.3
Transport Equipment	23	4.3
Electric Equipment and Machinery	23	4.3
General Purpose Machinery	22	4.1
Agriculture	19	3.5
Chemical Materials and Products	18	3.4
Timber Processing, Bamboo, Cane, Palm Fiber and Straw Products	17	3.2
Cultural, Educational and Sports Goods	13	2.4
Furniture Manufacturing	12	2.2
Printing and Record Medium Reproduction	10	1.9
Plastic Products	10	1.9
Medical and Pharmaceutical Products	7	1.3
Smelting and Pressing of Nonferrous Metals	7	1.3
Instruments, Meters, Cultural and Office Machinery	6	1.1
Smelting and Pressing of Ferrous Metals	6	1.1
Food Manufacturing	4	0.7
Electronic and Telecommunications Equipment	4	0.7
Beverage Manufacturing	3	0.6
Papermaking and Paper Products	3	0.6
Petroleum Processing and Coking	3	0.6
Rubber Products	2	0.4
Wholesale	2	0.4

Recycling of Used Resources and Materials	1	0.2
<b>Total</b>	536	100

Sources: collected by the authors

### 1.3.5 Development of Specialized Market

In China, industrial districts develop with specialized commodity markets. In other words, the specialized markets prevail in or around major industrial districts in China. Lacking distribution channels, SMEs heavily rely on local commodity markets to collect product and market information and to trade with their customers. Localized commodity markets reduce transaction costs of searching product or price information for wholesalers and promote the regional reputation for local manufacturers. Indeed, specialized markets and industrial districts are very much inter-related and inter-dependent – while specialized market may spur the growth of industrial districts; industrial districts, in turn, may help enlarging the scope and scale of the specialized markets.

Take the Changshu Commercial Market as an example. It was established in 1985 by Changshu Commercial City (Holdings Company) in the garment district of Changshu city, Jiangsu Province. It covers an area of 3.71 square kilometers including 35 wholesale markets, such as apparel, cloth, textile good for bed, footwear, hardware, electronic devices, etc. There are more than 25000 shops in the huge Commercial Market. The Changshu Commercial Market is a famous for its apparel production district. More than 5000 apparel firms and 1000 apparel related firms were born and benefited in this Commercial Market.

Specialized markets are becoming the preferred trading place for Chinese wholesalers. The number of the specialized markets increased very quickly. For example, according to the China Association of Textile and Apparel, there are 281 Textile and Apparel Markets in China and this number is even increasing. They play very important role in the development of the textile and apparel industry; however, many problems have to be solved, such as many wholesalers are selling similar products within their respective wholesale markets, this may result in price war and squeeze the profit margin of the wholesalers.

### 1.3.6 Core Enterprises

In China, several core enterprises largely determine the future of industrial districts. For example, three enterprises of Sanxiao, Wu'ai and Mingxing dominate the toothbrush cluster in Hangji, Jiangsu province, and have significantly contributed to the knowledge and information diffusion, the training of workers and the improvement of business management and also to the tax expansion of the local government.

## 1.4 Mapping the Industrial Districts in China

### 1.4.1 The National Level

A map of spatial distribution of industrial districts in the 15 selected provinces is made based on data from various sources, including official statistics, government reports, and Internet news. As Figure 3 shows, the spatial distribution of industrial districts in China is rather uneven, heavily concentrated in the southeastern coastal provinces, particularly in Zhejiang, Guangdong, Jiangsu and Fujian, with 136 in Zhejiang, 73 in Guangdong and 70 in Jiangsu.

Cities with more than 10 industrial districts are all located in the four coastal provinces. Wenzhou in Zhejiang ranks the first, with 38 industrial districts, followed by Ningbo in Zhejiang with 26 and Quanzhou in Fujian, with 21 industrial districts.

The uneven geographical distribution of industrial districts in China is associated with internal and external factors. First, with China’s economic reforms and open door policy, the global outsourcing and international relocation of industries have granted the coastal region locational advantages to develop industrial districts. Second, local entrepreneurship has been inspired in the market-driven economy. Third, the reforms of state-owned enterprises have also facilitated the development of industrial districts in China.

(Figure 3 is about here)

Tab.4 The distribution of Industrial Districts in Prefecture Cities (Top 15)

Prefecture City	Number of Industrial Districts	Province	Rank
Wenzhou	38	Zhejiang	1
Ningbo	26	Zhejiang	2
Quanzhou	21	Fujian	3
Taizhou	20	Zhejiang	4
Suzhou	19	Jiangsu	5
Shaoxing	16	Zhejiang	6
Foshan	14	Guangdong	7
Tai’an	13	Jiangsu	8
Hangzhou	12	Zhejiang	9
Yancheng	12	Jiangsu	10
Jiaxing	11	Zhejiang	11
Nantong	11	Jiangsu	12
Zhongshan	11	Guangdong	13
Fuzhou	10	Fujian	14
Shantou	10	Guangdong	15

Sources: Collected by the author

### 1.4.2 Zhejiang Province

Located in the Yangtze River Delta (YRD), Zhejiang province hosts the largest number of industrial districts in China. The remarkable development of industrial districts in Zhejiang is commonly coded as “Zhejiang phenomenon”. Zhejiang’s industrial districts are renown for their entrepreneurship. Most industrial districts in traditional industries were formed by small and privately owned enterprises. Almost all counties or districts in Zhejiang provinces have certain number of industrial districts. There are more than 100 industrial districts scattered in the province, with approximately 237 thousands enterprises employing over 600 thousands workers. Figure 4 illustrates the major industrial districts in the province.

Light industry has long been playing a dominant role in Zhejiang’s industrial development. There are a number of industrial districts in light industries. The province is leading in the exports and production of textile products in China and has significant advantages in chemical fiber, metal

mineral products, machinery, leather products, furniture, building materials, and household electrical appliances. Zhejiang province also tops the country in the production of chemical fiber, garments, cements, chemical pesticides, and telecommunication and electronic equipment. For instance, among 532 important industrial finished products in China, Zhejiang had 336 products entering the top ten, 56 products ranked the first, 109 ranked the second and 154 ranked the third among Chinese provinces in 2001 (Policy Research Group of Party Committee in Zhejiang Province, 2001).

There are thousands of specialized commodity exchange markets scattering in the towns and cities in Zhejiang. Many markets are located in or around industrial districts and maintain a very close relationship with industrial districts. Commodity exchange markets provide a platform for wholesalers, retailers, manufacturers and customers, promoting the development of industrial districts in Zhejiang.

(Figure 4 is about here)

### **1.4.3 Guangdong Province**

A distinctive feature in the Pearl River Delta (PRD) is the development of a number of industrial districts in the townships. Approximately one-quarter of the 404 townships in the PRD have developed certain types of industrial districts. These towns specialize in the production of one or several products; and prevail commonly in traditional manufacturing industries, agriculture as well as telecommunication and electronic equipment industry. Most of these specialized towns are located in the western PRD, particularly in Foshan, Jiangmen, and Zhongshan. Figure 5 lists some of the industrial districts in Guangdong province

Industrial districts in the traditional industries in Guangdong Province scatter among more than 100 townships (Lu, 2002). About 90% of towns specialize in industrial products. In 2003, the specialized towns contributed up to one third of the gross industrial output in Guangdong (Wang, 2004). Some spectacular examples include Rongui in Shunde specializing for home electrical appliances, Xiaolan in Zhongshan for ironware, and Guzhen in Zhongshan for lamps. Industrial districts in Guangdong concentrate in industries of textile, apparel, footwear, toys, plastic products, electronics and electrical goods, printing, telecommunication and electronic equipment, communication and technology (CT) and logistics.

As the first-mover in China's economic reforms, Guangdong has significantly benefited from 'processing and compensation trades' since the late 1970s. Enterprises in industrial districts of labor-intensive industries enter the global market through processing trade or OEM. Economic development in Guangdong owed substantial debt to the development of industrial districts, especially those heavily invested by Hong Kong and Taiwan companies.

(Figure 6 is about here.)

### **1.5 Impacts of Industrial Districts**

Industrial districts have been significantly contributing to the Chinese economy. They have been raising the nation's competitiveness, fostering entrepreneurs, creating employment opportunities, promoting urbanization and industrialization, and increasing resident's income.

First, industrial districts enhance China's industrial competitiveness and promote the Chinese enterprises to integrate with the global economy. Due to close business linkage within an industrial district, enterprises along a value chain can work together more effectively to improve production efficiency and product quality. Constituent firms may share inputs of intermediate goods and gain cost efficiency. For labor intensive industries such as like textiles, garments, and daily commodities, industrial districts can bring down labor cost and improve labor productivity. Industrial districts have stimulated Chinese enterprises to join in the global value chain and make China "the world factory" controlled by multinational corporations.

Second, industrial districts breed a large number of entrepreneurs. Industrial districts are more attractive for entrepreneurs to start new businesses because there are more market opportunities and accessible specialized inputs. There are additional external scale economies associated with labor pool and information spillovers. Industrial districts in China are cultivating a large number of entrepreneurs. The personal contributions of the leading entrepreneurs in industrial districts are largely embedded in the collective environments.

Third, industrial districts create huge labor demand and provide employment opportunities. As industrial districts grow, more labor is demanded and new jobs are created. Industrial districts have thereby become important sources of employment. Industrial districts also attract a large number of migrants, promoting the dual process of urbanization and industrialization.

Finally, industrial districts significantly raise incomes of local residents. Industrial districts are the major sources of regional competitiveness and facilitate the development of certain industries. Industrial districts are widespread in the developed provinces in China, including Zhejiang, Guangdong, Fujian, and Jiangsu. Take Zhejiang as an example, gross industrial output value of industrial districts was 1582.6 billion Yuan in 2005, which accounted for 64% of provincial total industrial output. The well-developed industrial districts also bring higher per capita disposable income to the local residents.

## **1.6 The Constraints and Weaknesses of Industrial Districts in China**

### **1.6.1 Low Price, Low Profits**

"Made in China" has been labeled as "low price but low quality" in the global markets. Many enterprises in industrial districts of China are seeking profits from cheap materials and labors, instead of pursuing high profits through quality improvement and technological innovation. Low prices of products mean low profits for producers. Enterprises' profits have been deeply squeezed in many industrial districts in China, such as those specializing in electrical appliances, shoes and apparel manufacturing, and wool textile. Less profitable industrial districts in China are characterized by labor-intensive, low technology and low entry threshold. As competition from other developing counties in labor-intensive exports becomes intense, comparable enterprises in China's industrial districts have to turn to orders from big buyers, which would substantially cut product prices. Producers from Zhejiang Province, for instance, won the order for FIFA World Cup 2006 apparel after intensive competition, but no enterprises indeed earned much from this order.

Even the low product prices cannot guarantee the market shares in the global market. Exports

from China are encountering increasing trade barriers on the targeted markets, including anti-dumping measures and intellectual property protection requirements. Lacking endogenous innovation capability, external research and development supports, and collective negotiation channels and mechanism, many industrial districts are stuck in the mud of copying and imitation, making them vulnerable to legal actions.

### **1.6.2 High External Costs, Unsustainable Development**

Price competitions among atomized firms within local industrial districts have resulted in the externalization of costs associated with public goods, such as environmental protection, resources conservation as well as the accumulation of social capital. In Dongguan, Guangdong Province, for example, the rapid economic growth comes side by side with the serious environmental deterioration. Rivers in Dongguan are so polluted that they don't fit for industrial or agricultural use. Heavy air pollution has been threats to health of local residents. In Changxing, Zhejiang Province, lead acid motorcycle battery industry dominates the local economy and children were reported to suffer from lead poisoning.

The rapid industrialization in China has also created huge demand for natural resources. With growing demands, the local production chains are extending both downwards and upwards. Industrial districts used to concentrate in functions of final assembly with imports of parts and materials have induced new firms specializing in fundamental materials and highly specialized parts production. The expansion of production chains in industrial districts has China's industrial districts fairly resource intensive. Without proper technology and management, ineffective consumption of resources is prevalent in all stages of the material processing and production.

Ignorance of the social responsibility has made the Chinese enterprises disadvantaged in the global market. Exports from China are encountering a variety of "green barriers" targeting on different social and environmental objectives, such as health concerns for toxic contents in products, safety design for users, and end-of-life management for recycling. The defects of the products made in China are widely blamed on public media. Products involved include garments, toys, leather, shoes, and low voltage electrical equipments. These blames have tremendous negative impacts on China's industrial districts and the image of "Made in China" as a whole.

### **1.6.3 Developmental State, Biased Policy**

The development of industrial districts in China is closely associated with the construction of development zones mainly set up by the local government. The economic growth has been in the top priority in the national policy since the early 1980s, and the GDP growth has become the most important indicator for the assessment of local officials. Many local governments are strongly in favor of foreign investments, which stimulate dramatic economic growth. To attract foreign investors, local governments compete fiercely with each other to grant preferential policies for investors. The land price for industrial use has been so low that local governments cannot sustain the investments on infrastructure. The land developers favor the development of real estate for higher profits. The governmental intervention however harmed the enthusiasm of local entrepreneurs.

Local governments are enthusiastic about planning industrial district. The complex business linkages within industrial districts have been simplified into the promotion of spatial concentration

of related enterprises. Lacking deep research and thorough understanding of the local contexts, industrial district planning is to build new industrial parks from scratch by relocating related firms to the parks. There are textile and clothing industrial parks, electronics industrial parks, furniture industrial parks, and even software industrial parks, or cartoon industrial parks in China. The top-down planning has launched another round of industrial park construction wave. Some local governments even force enterprises to relocate to these newly established industrial parks. Due to the cost increase, most firms oppose to the required relocation.

The small and medium sized firms (SMEs), playing an important role in the development of industrial districts, are hardly treated well in the industrial policy. Following the rationale of the planning economy, the local governments stress the large enterprises and relax control over SMEs. Local governments also work hard to reform the major enterprises but leave SMEs for themselves. In many industrial districts, the local government only concern about the development of large enterprises, and ignore the SMEs. No guarantees are for SMEs with land use, bank loans, as well as water and power supply in many industry districts.

SMEs in industrial districts however demand more supports to attain collective efficiency. Local governments should not only provide fundamental infrastructure, such as transportation, water and electricity power supply, but also intensive services to build a business friendly environment. Moreover, local governments should work on the accumulation of social capital since public goods benefit for the entire local community. In industrial districts specializing in a certain industrial sector, the local governments can do more to help firms in the industrial districts. For instance, local governments could organize local firms to negotiate on industrial standards, establish game rules in emerging markets, train labor forces and attract talents, and promote industrial linkages within the industrial districts.

#### **1.6.4 New Trend of Relocation to Inner Provinces for Lower Labour Costs**

Over the past twenty years, China has achieved high growth rates, as well as high rates of investment. However, wages and employment conditions have not necessarily followed along the same upgrading path. The rising demand for skilled labour, as well as the slowed flow of migrant labour from inner provinces has resulted in labour shortages. According to the Guangdong Office of Labour and Social Security (LSS), nearly every industrial sector is now short of labour.

Here we provide the official monthly minimum wages by province/city in the year of 2005 and 2006, to give a general view of Chinese average labour wage levels. China's standing *Order for Minimum Wage (Zuidi Gongzi Guiding)* was enacted in early 2004, which substituted an old minimum wage system and took effect from March 1<sup>st</sup> 2004. It required that each province shall adjust the monthly minimum wage level every two years.

There are distinct disparities between the provinces/cities in terms of the level of monthly and hourly minimum wages (Figure 6). The Ministry of Labor and Social Security of China regulates several levels of the monthly minimum wage standard and the minimum hourly wage standard in each province. In 2006 the level of Guangdong province is 780 yuan, the highest among China's provinces., higher than 690 yuan level for Shanghai and Jiangsu ,640 yuan level for Beijing. While for the minimum monthly wage standard at the city level, Shenzhen city 810 yuan is in the top.. In a city group of Jiangsu Province including Suzhou, Changshu, Zhangjiagang, Kunshan, Wujiang,

Taicang, the minimum monthly wage standard is 750 yuan. In Zhejiang province, the minimum monthly wage standard is 750 yuan in general. The minimum monthly wage standard is different among the same province, for example in Zhejiang Province, 670 yuan in the cities of Taizhou, Lishui and Jinhua; 620 yuan in the cities of Yiwu, Zhoushan and Quzhou; 540 yuan in the cities of Shaoxing, Jiaxing and Huzhou. For the minimum hourly wage standard defined 6.3 yuan in Jiangsu Province and 6.4 Yuan in the Zhejiang cities of Hangzhou, Ningbo and Wenzhou

Tab. 5 The minimum monthly wage standard in different provinces and cities (There are different levels in a province or cities)

City or Province	The minimum monthly wage standard (RMB ¥) (November, 2006)								
Shenzhen	810	700							
Guangdong	780	690	600	500	450				
Shanghai	750								
Jiangsu	750	620	520						
Zhejiang	750	670	620	540					
Tianjin	670	650							
Xinjiang	670	620	580	550	520	500	480	460	440
Fujian	650	600	570	550	480	400			
Dalian	650	600	500						
Beijing	640								
Heilongjiang	620	590	475	450	420	400	380		
Shandong	610	540	480	430	390				
Hunan	600	500	480	450	420	400			
Xiameng	600	550	480						
Liaoning	590	480	420						
Hebei	580	540	480	440					
Hainan	580	480	430						
Chongqing	580	480	440						
Sichuang	580	510	450	400					
Neimenggu	560	520	460	400					
Shanxi	550	510	470	430					
Guizhou	550	500	450						
Yunnan	540	480	420						
Shanxi	540	500	460	420					
Anhui	520	500	460	430	390	360			
Jilin	510	460	410						
Guangxi	500	435	390	345					
Xizang	495	470	445						
Henan	480	400	320						
Hubei	460	400	360	320	280				
Qinghai	460	450	440						
Ningxia	450	420	380						
Gansu	430	400	360	320					
Jiangxi	360	330	300	270					

Source: Ministry of Labor and Social Security, PRC

Tab. 6 The minimum wage standard in Guangdong province

Level	yuan/ month	yuan/h our	City
1	780	4.66	Guangzhou
2	690	4.12	Zhuhai,Foshan,Dongguan,Zhongshan
3	600	3.59	Shantou,Huizhou,Jiangmen
4	500	2.99	Shaoguan,Heyuan,Meizhou,Shanwei,Zhanjiang,Maoming, Zhaoqing,Qingyuan,Chaozhou,Jieyang,Yunfu
5	450	2.69	Parts of county, and county-level city

Source: Ministry of Labor and Social Security, PRC

As far as Guangdong province is concerned, it is actually the first choice for China's rural migrants to shift and find jobs since so many factories require a great deal of low wage workers. However, the situation is changing in the past years, in respect that labour shortage occurs in both Pearl River Delta and Yangtze River Delta areas.

There are several reasons causing this relocation to occur. The first is the rising labour cost, land cost and environmental cost. The second is the resource is exhausted in some resource-based clusters, such as the argil exhaustedness in the ceramic industrial district in Foshan city of Guangdong. The provincial government of Guangdong put forward the policy to push the industry relocation within Guangdong Province. It promotes the collaboration of the twin cities of the advanced one and the one lagged behind to build so-called "relocation parks". It plans to build more than 20 such parks in Guangdong.

If China's interior provinces can provide a hospitable investment climate to complement massive new investments in infrastructure, firms compelled by rising wages and land costs may depart from eastern and southern coastal locations and find new homes in central and western China rather than moving overseas. A good example is the famous apparel company of Ningbo - Younger Group located its branch plant in the largest western city of Chongqing. The firms specialized in the productions of wool textile and many accessories are setting around it. A new apparel district is formed.

Another example is the relocation of the Foshan-based ceramic tile manufacturers. There is a big cluster of ceramic tile manufactures in the towns of Shiwan and Nanzhuang near the central city of Foshan, Guangdong Province. Over congestion and heavy pollution forced the companies went away. The Kohler and Asaceramic set up their plants in Shandong province so that they could expand output and reduce transport cost. The Cimic and Sinyih Ceramic Group ("Champion" brand) set up their plants in Chengdu, Sichuan Province. Several big ceramic firms set up their plants in in Jiangxi Province, such as Dongpeng, Guangdong Wonderful Co. Lit. (Marcopolo Tiles), Kito Ceramics, ARROW, and Oceano. In addition, New Zhong Yuan set up its plants in Jiajiang of Sichuan Province, Hengyang of Hunan Province and Gao'an of Jiangxi Province.

The relocation of many SMEs from coastal industrial districts to the regions in the central, western and northern China for lower labour costs will lead to a new internal Chinese division of labour of the regions. The coastal districts will become the outsourcers to lower-cost inner provinces and the higher technology or design centers.

### **1.7 Linking Industrial Districts in Italy and China: Reshaping the Global Value Chain**

Industrial districts in China share many common characters with their counterparts in Italy. For instance, both highlight the role of small family-based firms in the local industrial districts and in similar industrial sectors. Both see deep functional specialization along a specific product chain within an industrial district. Industrial districts in Italy and China may be linked to shape the global value chain.

#### **1.7.1 Learning for Cooperation**

The constituent firms in China's industrial districts have learned from the experiences of Italian industrial districts through intensive bilateral trade and supply networks. Trade between China and Italy in 2005 reached 18.62 billion US Dollars, which grew by 1.7 times from the year 2000, with an annual growth rate of 22%. Italy is now China's 5th trade partner in the EU. Italy imports from China the electro-mechanical products, textiles, metal products, chemical products, luggage, shoes, rubbers and plastic products, and exports to China the machinery and equipments, chemicals, leather and manufacturers, optical devices and medical products. Take Guangdong province as an example, the main exported products from Guangdong to Italy include air conditioners, apparel and clothing annex, travel goods and luggage. Guangdong imports from Italy the cattle leather, horse leather, IC and microelectronic components, textile machinery and machine parts, off-circuit protection devices, and plastics in primary forms. The trade pattern illustrates strong complementarities between the industrial districts in Italy and China.

Chinese firms producing the same commodities with their peers in Italy also learn from them through outsourcing. For example, enterprises in the central and northeastern Italy are mainly engaged in the industries of apparel, luggage and jewelry. The Italian enterprises specialize in the upstream functions of the traditional industries such as industrial design and materials and outsource a part of production to Chinese firms.

China's industrial districts have played an important role in the global outsourcing networks. A broader background of global job off-sourcing and industrial shifting is necessary to better understand the trajectories and dynamics of industrial districts in China. A large number of Chinese firms in industrial districts joined in the global value chains controlled by branded manufacturers and retailers through OEM and are locked into the low value-added functions. However, with the emergence of new technologies, especially biotechnology, multimedia technology, nano-technology, and aviation and space technology, China's industrial districts should maintain linkages with the world's advanced technology manufacturers, and position well in the international division of labor.

In Italy, a strong "de-localization phenomena" has been associated with the double exchanges of manpower, and technological and financial investments, which shape the international division of labor. It was opened to promote the internationalization of business communities, creating "international districts" by a cluster of international industrial and trade units. For example, in

Prato, as firms increasingly outsource from newly industrialized developing economies including China, a growing number of migratory workers come from these countries working at lower salaries. Meanwhile, financial investments go to the newly industrialized economies like China.

Firms in China and Italy compete with each other in some industries. It is known that the production of Italian traditional industries is low skilled but of high-quality. The Italian enterprises will feel threatened when their technologies and skills can be easily learned by the Chinese enterprises. For example, Chinese entrepreneurs and engineers applied for the participation in the International Exhibition in Italy, but were rejected because the Italian organizers believed that Chinese firms might steal the industrial designs and technologies. The report of “Relations between Italian companies and Chinese market” showed that 50% of the members in the Italian Engineers Association were pessimistic about the prospects of the Chinese market. However, as the improvement in the protection of Intellectual Property Rights, this situation would change overtime.

### **1.7.2 Sharing Opportunities in the Growing Markets**

China is among the fast growing markets in the world, providing great opportunities for firms from Italy. According to the “IL Sole 24 Ore”, at the end of 2005, the Italian investment projects in China accumulated to 2976, with a total investment of 64 billion US Dollars. Six Italian international logistics companies established a joint venture, Inlog-China, in China. It planned to set up a comprehensive development zone in Tianjin to integrate the modern logistics, production, sales, transportation and storage for the Italian SMEs. The Inlog-China attempted to lead the model of integrating Italian logistics industries with Italianate industrial districts in China.

Italian entrepreneurs see China’s rapid economic growth as great opportunities for the development of modern logistics industry. The boundaries between production and logistics in China have been blurred. Some intermediate goods are produced by small enterprises in Italy, and finished goods are assembled in China. There are many small enterprises and logistics service companies around “export processing zones” in the Chinese cities. China’s logistics networks haven’t been fully established, and foreign logistic enterprises have more opportunities to bring in successful experiences and technologies. Building a modern logistic industry and comprehensive development zones in Tianjin may attract more Italian invests.

The survey of “Relations between Italian companies and Chinese market” points out that most members in the Italian engineer association believe that there is a knowledge gap between China and Italy. In particular, China is laggard behind in the designs of products. Chinese merchants and migrant workers in Italy have established a social network, providing Italian enterprises with information of Chinese markets. The international linkages will enhance the opportunities of being successful for Italian investments in China.

### **1.7.3 Learning from the Third Italy**

The similarities between industrial districts in Italy and China should earn more attention from both academics and governments so as to promote inter-governmental collaborations in economic development. The real trajectory of the industrial districts in Italy is more important to the latecomers in China. “The Third Italy” was not industrialized in the 1960s, but it jumped from the periphery to the center of Europe only after ten years. This economic vitality was based upon its

unique innovation of cultural practices and social relations and is difficult to be duplicated in other places. Such regions remain irreplaceable as the world innovation centers even in the period of global shift of industries.

In the Italian industrial districts, the deep division of labor and inter firm collaboration and competition make SMEs financed easily. Meanwhile the Regional Industrial Networks encourage investments in innovations from SMEs, and creates favorable conditions for technological innovations. The SMEs-favored financial policies create increasing returns to scale along the value chain and also stimulate professionalism in industrial districts.

China learned from the Third Italy to promote the development of SMEs. Although the Chinese industrial policies are in favor of large enterprises and groups, the specialized industrial districts, which mainly consist of SMEs, have widely distributed across the country. These industrial districts are largely market-driven. The Italian model of industrial districts suggests that small enterprises can exploit their advantages of being small. Small enterprises are weak not because of their small size, but because of the isolation from each other. They could form business networks to strengthen inter-firm cooperation. The key issue is how to strengthen inter-firm ties and to promote healthy inter-firm cooperation and competitions within clusters by improving the economies of scale and scope.

## **1.8 Conclusion**

This chapter describes the overall picture in regional and sectorial distribution of the industrial districts in China. The chapter also illustrates their role in Chinese economic development and the problems to be solved.

The industrial districts focus on one product in a locality due to economic liberalization and are conducive to industrial linkages that respond to market signals. Many places of industrial districts in the coastal area, especially south-eastern China, which was a blank in China's old industrial map, has become a rising bright star of manufacturing of commodities. Since the 1980s these local businesses have integrated with the state economic sector and been directly involved in China's transition to a market economy, finding and filling various employment niches left by the structural defects of the command economy. This remarkable specialization and intense concentration have helped China's to increase manufacturing capacity and produce cheaper consumer goods for overseas businessmen and consumers. In the process of district development, entrepreneurial ability has played a significant role. If the resource endowment does not explain the differences in their economies, then differences in quality and quantity of human resources must. Major emphasis should be laid on that elusive factor of production called 'entrepreneurship'.

As we can see that the Chinese districts are forming the institutional and social links necessary for a competitive response in globalization. There are three reasons to believe that the industrial clustering in China has its uniqueness: Firstly, the territorially embedded regional economy usually develops in the districts where the legacy of the top-town bureaucratic systems is weak and the local entrepreneurship is strong. As China's tentative reform goes on, industrial districts in different regions transform themselves constantly in the process of industrialization and upgrade. Secondly, the investment from the outside world strongly affects the structure of the local

production network. The global linkages between Chinese local firms and the firms in advanced countries are stronger than the local linkages among Chinese firms in the clusters. Thirdly, most of the districts in China have shaped since the economic reform and have only a short history of less than 20 years. For China, it has a long way to build mature market mechanism to facilitate competitive districts where social capital is rich in the process of firms' interaction.

The Sino-Italian bilateral trade cooperation has been growing rapidly in recent years and more Italian entrepreneurs have invested in China. China has also stressed the development of economic and trade ties with Italy. China is a huge market with a good business environment for foreign investors while Italy has advantages in capital, technology and management. The bilateral cooperation between China and Italy would generate a win-win situation for both parties.

According to the survey of the Italian Association of Industrial Promotion (IPI) in 2005, although the Italian firms of all sizes have increased their overseas investments, only about 10 % and 3.1% of Italian firms invested in Asia and in China, respectively. There is still great potential for Italian firms to find new opportunities in China.

Research on industrial clusters in China suggests a way of harmonizing the global redistribution of job and business to avoid the negative impacts of international competition among industrial districts. It is also critical to take measures to turn the fragmented "local industrial districts" into a model of "the international industrial districts". Measures would include

- Establishing "Sino-Italian Partnership Agreements", promoting mutual understanding and communication
- Facilitating the joint-organization learning between similar industrial districts from both countries for managerial and technical manpower in SME's and for the exchanges of industrial district strategy
- Providing full services for SMEs, with more in-depth researches on industrial linkages between the two countries at the district level

In a word, the Sino-Italian trade depends on efforts of all parties involved. Although there are some problems in bilateral trade between China and Italy, the similarities of industrial districts and the complementarities in products will undoubtedly bring great potential for further cooperation.

## SUPPLEMENT

### **Brief Review of the Italian Industrial Districts Experience Entering to China**

Back in 1983, Professor Giacomo Becattini, the distinctive Italian scholar on industrial districts, gave an invited lecture on "The Development of Italian Industrial Districts" at the Chinese Academy of Social Sciences (CASS). It was the first time that Marshallian industrial districts and the development experience of Italian industrial districts are introduced to the Chinese audience, and caused strong interest and concern of scholars from related areas. In 1986, the CASS scholars Luo Hongbo and Rong Dianxin investigated Italian industrial districts, and wrote a series of articles were included in the Chinese book *Western European SMEs* (Yang Zugong, 1987) and *Western European Regional Development* (Zhang Yunling & Gu Junli, 1988), and published in the Chinese journal *Western European Research*. The subject attracted attention of some Chinese scholars.

In 1992, Professor Wang Jici from Peking University began to follow with interest on Industrial Districts Theory in the Commission on the Organization of Industrial Space, International Geographical Union<sup>3</sup>, and presented the paper entitled "The making of new industrial districts in China: Insights into the development zone's phenomenon" on symposium "New Industrial Districts"<sup>4</sup>, the Fourth International Academic Conference "Industrial Changes in East Asia" held in Beijing in 1994. Meanwhile she wrote Industrial Districts in her text book "Modern Industrial Geography", including Italian ceramics industrial districts in Sassuolo as a case.

In 1996, the book *Kingdom of SMEs – Italy* written by Luo Hongbo and Rong Dianxin published, and it details the Italian experience in different industrial districts, emphasizes specialization and social service system are the lifeline of industrial districts. In November 1996, Dr. Roepstorff from United Nations Industrial Development Organization did an academic report in Development Research Center of the State Council in China, also spoke of the need to study the experience of new industrial districts in Italy.

Entering the 21st century, the economic and trade cooperation between China and Italy is developing in depth, and the researches on Italian industrial districts in China raise more concern. The business community and government delegations and academic individuals have come to visit Italian industrial districts. The lectures on Italian SMEs and industrial districts given by Italian scholars in China are increasing, some famous industry economists, such as the current president of the Italian Feilala University Professor Patrizio Bianchi, even as senior consultant for province leaders in China, with suggestions and proposals for development of local industrial districts

In 1997, Wang Jici published an article called "Thinking about Scale of Enterprises"<sup>5</sup>. According the experiment of Italian industrial districts, Wang Jici raised the points that corporate merger for large scale is not the only best strategy of industrial organization. In 1998, Wang Jici took charge of the project of National Natural Science Foundation "The New Industrial Districts Theory and its Application in China". They investigated several specialized towns in Guangdong, Zhejiang and Hebei province, and found that related SMEs in specific industrial sectors clustered geographically. They are small, but great vitality.

After the phenomenon of specialized Industrial Districts in China recognized, Guangdong province was the first to formulate policies and measures to encourage the development of local specialized industrial districts. Back in

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<sup>3</sup> Wang Jici was pointed as a full member of the Commission on the Organization of Industrial Space for the period 1992-1996, 1997-2000 (the commission on the Dynamics of Economic Space for the period 2001-2004), International Geographical Union (IGU).

<sup>4</sup> The Chinese version was published in the journal *Geographic Translation* in 1994, No. 4.

<sup>5</sup> The article published in "industry economy in China," 1997, p. 7, 27-30, and reprinted in "People's Daily" version 6 "Newspapers Digest" column in August 23, 1997.

1999, the Office of Science and Technology of Guangdong province pointed out, cluster is the important point of technology-oriented economy in The 10th Five-Year Plan of the province. Based on specialized town, facing PRD and radiating entire industry, the government constructed efficient innovation centers in 2000.

In 2000, Wang Jici gave a speech "Development Prospects of Specialized Industrial Districts of Zhejiang Province with a Perspective of Italian Model" on "Private Enterprises Economic Forum of Zhejiang Province" in the Second Investment Fair in Nongbo city<sup>6</sup>. From then on, the concept of industrial clusters is a great upsurge in China. Many Chinese researchers introduced and reviewed the studies on industry cluster abroad. Some scholars have conducted in-depth empirical study on a number of typical regions of industrial districts (Wang Jici, 2001).

In recent years, with domestic studies on industry clusters developing in depth, related case studies are emerging, and relevant policy-making government departments attach great importance.

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