
The Shanghai Economic Sphere and its Evolution as a Mega-Region —Geographical Expansion and the Rising Added Value of Shanghai—

By **Keiichiro Oizumi**, *Senior Economist*
Junya Sano, *Senior Researcher*
Center for Pacific Business Studies
Economics Department
Japan Research Institute

Summary

1. This article examines characteristics of economic development of the Shanghai economic sphere, which is defined as consisting of Shanghai Municipality, Jiangsu Province and Zhejiang Province. Income levels in this region are by far the highest in China.
2. With a population of 140 million, the Shanghai economic sphere has a gross regional product similar to that of South Korea. At over \$5,000, the region's per capita GRP is close to that of Malaysia. Development has been driven by export-based industrialization. In 2007, the region's exports were worth \$482.0 billion, equivalent to 40% of the total exports of China. This is higher than the total for South Korea. Foreign-owned enterprises are the main driving force behind this performance. In 2007, foreign direct investment reached \$40.2 billion.
3. Also significant is the region's expansion as a consumer market. The Shanghai economic sphere accounts for approximately 20% of total retail sales in China. In urban areas, diffusion rates for televisions, washing machines, refrigerators and other electrical appliances have reached nearly 100%, and ownership of air conditioners, computers and mobile telephones is also rising. It is estimated that over 2 million households in the region have annual incomes in excess of \$20,000.
4. Since the 1990s, the economic development of the Shanghai economic sphere has been accelerated by the active involvement of the central government in the development of the economic sphere, including the Pudong development in Shanghai, and by a continual influx of Japanese and Taiwanese companies in the area around Shanghai under the open-door policy. In the 21st century, the region's development has moved into high gear under the Yangtze River Delta Economic Zone concept. Activities based on this concept, which encompasses municipality and provinces, are expected to raise the level of development even higher.
5. The geographical extent of the Shanghai economic sphere is also expanding. This is apparent from changes in the number of prefecture-level cities, which form the next tier of government administration below the provinces. In 2000, apart from Shanghai itself, there were just three prefecture-level cities with per capita GRP in excess of 20,000 yuan. By 2007, the number had risen to 18. At the same time, there has been a dramatic improvement in the productivity of manufacturing and service industries in the region's core cities, such as Shanghai and Suzhou.
6. However, there is major economic disparity between the Shanghai economic sphere and other regions. This is particularly true of Anhui Province and the northern part of Jiangsu Province, where massive population outflows triggered by the slow pace of development appear to be causing depopulation. When this factor is taken into account, it seems unlikely that the Shanghai economic sphere will be able to maintain its present rate of expansion.
7. The global economic recession that began in the autumn of 2008 has inevitably caused economic activity in the Shanghai economic sphere to decelerate significantly. Despite this, the region's growth potential remains high compared with other export-dependent Asian economies, which have all slipped into negative growth. Yet there are indications that the region's capacity to supply labor, which has sustained industrialization in the past, may be nearing its limit. Improvements to the competitiveness of manufacturing and service industries will therefore be essential to the sustainable development of the Shanghai economic sphere in the future. This is especially true of service industries, which will need to encourage increased inflows of foreign capital and technology and attract talented human resources from overseas. Next year's Shanghai Expo is expected to play a key role in this context.

Introduction

In this article we will examine characteristics of the economic development of the Shanghai municipality and the neighboring provinces of Jiangsu and Zhejiang, which together form a single economic area known as the “Shanghai economic sphere.” The decision to analyze a single economic area reflects the size of China, which has a population of 1.3 billion and a land area 25 times the size of Japan. The authors felt that a study limited to a specific region would provide a more accurate picture of current growth patterns in China. With a per capita GDP of just over \$3,000, China as a whole is still classed as a developing country. However, there are areas, such as Shanghai, where per capita GDP is already above \$10,000, and there is a risk that assessments based solely on national indicators will fail to provide a true picture of the remarkable development that is occurring in coastal regions. It also seems meaningful to approach an area in which there are many high-income direct-controlled municipalities and regions in close proximity to each other as a single region.

In recent years, economic spheres encompassing multiple cities and provinces have also attracted growing interest within China. For example, the National Bureau of Statistics of China now publishes economic yearbooks covering the Yangtze River Delta, the Pearl River Delta, Hong Kong, Macao and Taiwan from 2003. Also, a 2007 report published by Shanghai Jiao Tong University on urban areas in China includes a comparative study of 18 economic spheres⁽¹⁾ (Gao, R., Wu, X., Che, C. [2008]). One of the conclusions of that study is an estimation that the greater Shanghai area will overtake New York and Tokyo to become the world’s biggest urban area by 2018⁽²⁾.

There is also international interest in economic spheres centering on major cities. For example, Richard Florida, a well-known urban studies theorist, has used the term “mega-region” to denote the areas that power the world economy. His group identifies these areas by using satellite photographs to measure the strength and extent of the light emitted by them at night. The 40 mega-regions listed by Florida include three in China:

the Beijing area, the Shanghai area, and the Shenzhen-Hong Kong area. Over a short period of time, these areas are expected to evolve from factories for the world into new production centers for innovation and creativity (Florida, R. [2008]).

An understanding of these areas, which are smaller than the national level but bigger than cities or provinces, is also important when considering business development in China. For example, there is a major regional economic disparity in China, and it would be erroneous to assume, based on the prosperity of Shanghai and Beijing, that China is a market of 1.3 billion people. Instead, business strategies need to be based on specific perspectives, such as the geographical extent of the prosperity generated by Shanghai and Beijing.

This perception is reflected in the author’s decision to define Shanghai Municipality, Jiangsu Province and Zhejiang Province as the Shanghai economic sphere. Economic conditions in this economic sphere were analyzed using data from statistical yearbooks for each municipality and province. This article is structured as follows.

In Part I, we will ascertain the level of regional economic disparity in China and clarify the economic status of the Shanghai economic sphere. This will be followed in Part II by a review of the region’s development processes from a policy perspective. This review will also show that initiatives by central and regional governments are starting to move into high gear. In Part III we will analyze the direction of industrialization and service industry development in the Shanghai economic sphere and examine changes in areas of activity and industrial structures from the perspective of prefecture-level cities. This analysis will show that areas of activity have expanded, and that there has been a shift toward high-added-value activities in the central region, including Shanghai. In Part IV, an analysis of the impact of the global economic recession on Shanghai and the Shanghai economic sphere will be followed by an examination of medium- to long-term issues.

I. The Economic Status of the Shanghai Economic Sphere

(1) Economic Growth Driven by Three Regions

China has achieved amazing economic development since shifting to its reform and open-door policy in 1978. Between 1979 and 2008, its real GDP growth rate averaged 9.8% per annum. Obviously, not all regions within China achieved the same high level of growth. Until the 1990s, China's approach was increasingly permeated by a policy of allowing regions with development potential to achieve prosperity first. This stance, together with increased economic freedom, resulted in rapid growth in coastal regions. The resulting economic disparity with inland regions would eventually emerge as a social problem. However, by the start of the 21st century, inland regions were also starting to achieve high growth. All direct-controlled municipalities, provinces and autonomous regions (referred to below as "provinces") except Yunnan recorded double-digit average real GDP growth rates between 2000 and 2007 (Table 1).

However, there is still considerable economic disparity between regions. According to statistics for 2007, Shanghai's per capita GDP, which was the highest in China at \$8,623, was nine times higher than Guizhou's, which was the lowest at \$958. Levels are extremely high in the top-ranking provinces. The top six provinces—Shanghai, Beijing, Tianjin, Zhejiang, Jiangsu and Guangdong—together account for 20.2% of China's total population but 39.7% of gross regional product (GRP). Beijing and Tianjin are close together, as are Shanghai, Zhejiang and Jiangsu. Guangdong has close links to Hong Kong. Beijing and Tianjin are known as the "Bohai Rim region," Shanghai, Zhejiang and Jiangsu as the "Yangtze River Delta economic sphere," and Guangdong and Hong Kong as the "Pearl River Delta economic sphere." In this article, we will focus on the Yangtze River Delta economic sphere, and Shanghai, Zhejiang and Jiangsu will be referred to as the "Shanghai economic sphere."

Table 1 Economic Disparity and Migration in China

Region	Per Capita GDP		Real GDP Growth Rate 2000-07 (%)	Population Inflow (10 thousands)	Population inflow rate (‰)
	2000 (\$)	2007 (\$)			
Shanghai	3,284	8,623	12.2	301.4	170.0
Beijing	2,167	7,529	12.3	224.5	146
Tianjin	1,978	5,954	14.2	90.9	87
Zhejiang	1,559	4,879	13.4	506.1	103.0
Jiangsu	1,394	4,438	13.5	329.1	44.0
Guangdong	1,351	4,324	13.6	1,199.6	131.0
Shandong	1,137	3,644	13.5	92.3	10.0
Fujian	1,364	3,395	12.0	193.4	55.0
Liaoning	1,331	3,371	12.0	67.4	16.0
Inner Mongolia	712	3,329	17.7	39.4	17.0
Hebei	912	2,596	11.8	61.2	9.0
Jilin	806	2,545	12.0	21.8	8.0
Heilongjiang	1,065	2,429	11.0	19.5	5.0
Shanxi	602	2,221	13.1	21.0	6.0
Xinjiang	856	2,211	10.5	57.8	29.0
Hubei	857	2,129	11.2	50.1	9.0
Henan	670	2,108	12.3	28.0	3.0
Chongqing	621	1,924	11.7	42.7	15.0
Shaanxi	557	1,917	12.2	25.5	7.0
Ningxia	571	1,916	11.5	7.5	13.0
Hunan	692	1,903	11.1	49.4	8.0
Hainan	796	1,903	11.1	19.1	23.0
Qinghai	615	1,866	12.1	7.4	14.0
Sichuan	582	1,699	11.9	76.4	9.0
Jiangxi	584	1,655	11.9	49.9	12.0
Guangxi	552	1,642	11.8	39.7	9.0
Tibet	542	1,584	12.7	2.5	9.0
Anhui	613	1,582	11.3	66.8	11.0
Yunnan	551	1,381	9.9	46.9	11.0
Gansu	464	1,357	11.1	11.8	5.0
Guizhou	340	958	10.9	53.1	14.0
National	928	2,742	10.3	3,802.2	—

Notes: Dollar exchange rates are yearly averages. Population inflows were estimated using data from a 1% national population sampling survey in 2005. Population inflow rates are calculated by dividing population inflows by populations and are shown in thousandths (‰).

Source: *China Statistical Yearbook*, 2005 1% national population sampling survey, etc.

In recent years, there have been dramatic population movements from rural areas into these economic spheres. Rural people who move to cities for work are known as *nong-min-gong* (peasant workers). Some estimates place the number of people in this category as high as 250 million at the end of 2008. According to data from the 2005 1% national population sampling survey, the top six municipalities and provinces accounted for 70% (approximately 26.51 million people) of total population movement across city and provincial boundaries between 2000 and 2005. It is estimated that 30%, or approximately 11.37 million people,

moved into the Shanghai economic sphere.

(2) Economic Scale Comparable to South Korea

Table 2 analyzes the economic scale of the Shanghai economic sphere. To ascertain the relative ranking of Shanghai, data for all of China, the Bohai Rim region (Beijing, Tianjin), the Pearl River Delta economic sphere (Guangdong Province), South Korea, Thailand and Malaysia were also included.

Population statistics for Shanghai show that the registered population was 13.79 million and the resident population 18.58 million in 2007. The resident population represents the number of people actually living in Shanghai, including peasant workers. The resident population will be higher than the registered population in regions that receive large inflows of peasant workers, and lower than the registered population in regions from which peasant workers migrate. Because large numbers of migrant workers flow into Shanghai, its resident population is over 4 million greater than its registered population.

Shanghai's registered population and resident population are both below 2% of the totals for all of China. However, its gross regional product (GRP) of 1,218.9 billion yuan is equivalent to 4.7% of the national total. In dollar terms, Shanghai's GRP of approximately \$160 billion is similar to that of Malaysia (\$186.7 billion). At \$8,627, the per capita GRP of Shanghai's resident population is substantially higher than the Malaysian figure of \$6,872. Per capita GRP for the registered population is in excess of \$10,000 (\$11,624).

According to the World Bank classifications, countries with per capita gross national income (GNI) of \$935 or lower are low-income countries. Countries with per capita GNI over \$935 and under \$11,456 are classed as middle-income countries, and those with figures over \$11,456 are regarded as high-income countries⁽³⁾. A per capita GNI of \$3,705 is the dividing line between lower middle-income and higher middle-income countries. If GDP and GNI are treated as equivalent, Shanghai has reached the level of a high-income country if the per capita figure is based on its registered population and would rank among higher middle-countries based on the figure for its

Table 2 The Scale of the Shanghai Economic Sphere (1990, 2007)

	Population				GDP, GRP				Per Capita GDP, GRP			
	Upper: registered population, Lower: resident population % = percentage of total				Upper: 100 million yuan, Lower: 100 million dollars % = percentage of total				Upper: registered population, Lower: resident population			
	1990		2007		1990		2007		1990		2007	
	(ten thousand people)	(%)	(ten thousand people)	(%)	(100 million of yuan, \$)	(%)	(100 million of yuan, \$)	(%)	(yuan)	(dollars)	(yuan)	(dollars)
All of China	114,333	100.0	132,129	100.0	18,668	100.0	257,306	100.0	1,633	341	19,474	2,561
	-	-	-	-	3,903		33,838					
Shanghai economic sphere	12,190	10.7	13,392	10.1	3,104	16.6	56,710	22.0	2,546	532	42,346	5,569
	12,185	10.7	14,543	11.0	649		7,458		2,547	533	38,995	5,128
Shanghai Municipality	1,283	1.1	1,379	1.0	782	4.2	12,189	4.7	6,095	1,274	88,390	11,624
	1,334	1.2	1,858	1.4	163		1,603		5,862	1,226	65,603	8,627
Jiangsu Province	6,672	5.8	7,354	5.6	1,417	7.6	25,741	10.0	2,124	444	35,003	4,603
	6,706	5.9	7,625	5.8	296		3,385		2,113	442	33,759	4,440
Zhejiang Province	4,235	3.7	4,659	3.5	905	4.8	18,780	7.3	2,137	447	40,309	5,301
	4,145	3.6	5,060	3.8	189		2,470		2,183	456	37,115	4,881
Bohai Rim economic sphere	1,898	1.7	2,172	1.6	812	4.3	14,403	5.6	4,278	894	66,312	8,721
	1,961	1.7	2,748	2.1	170		1,894		4,141	866	52,413	6,893
Pearl River Delta economic sphere	6,246	5.5	8,156	6.2	1,559	8.4	31,084	12.1	2,496	522	38,112	5,012
	6,283	5.5	9,449	7.2	326		4,088		2,481	519	32,897	4,326
	(ten thousand people)		(ten thousand people)		(\$100 millions)		(\$100 millions)		(\$)		(\$)	
South Korea	4,287		4,846		2,638		9,698		6,153		20,012	
Thailand	5,584		6,575		853		2,458		1,528		3,738	
Malaysia	1,810		2,717		440		1,867		2,432		6,872	

Source: Compiled using data from the *China Statistical Yearbook*, the Asian Development Bank and other sources

resident population. In other words, if Shanghai is viewed in isolation from the rest of China, it is now approaching the income levels seen in developed nations.

The Shanghai economic sphere, which includes Jiangsu Province and Zhejiang Province as well as Shanghai, has a resident population of 145.43 million, which is greater than Japan's population of 127.69 million. Its GRP of 5,671.0 billion yuan (\$745.8 billion) is approaching the level of South Korea (\$969.8 billion)⁽⁴⁾. The importance of the Shanghai economic sphere can be gauged from the fact that it has only 11.0% of China's total population but generates 22.0% of GRP.

At 38,995 yuan (\$5,128), per capita GRP is lower than the figure for Shanghai alone but twice as high as the national average of \$2,561. Given the region's high growth rate, which has averaged 13% in recent years, its per capita GRP can be expected to reach Malaysia's level (\$6,872) in the not-too-distant future. Jiangsu Province and Zhejiang Province still include many impoverished regions. If these are excluded, per capita GRP rises to almost \$7,000 (see Part III).

(3) 40% of National Production

Export-oriented industrialization has driven the high growth achieved by the Shanghai economic sphere. Table 3 traces trends in exports, export de-

pendence (the ratio of exports to GDP [GRP]) and foreign direct investment inflows.

In 2007, exports from Shanghai Municipality amounted to \$137.3 billion, or 11.3% of the total for China. This total is close to the figures for Thailand (\$152.2 billion) and Malaysia (\$176.0 billion). The pace of growth has been especially fast in recent years. Between 2000 and 2007, exports increased by an average 27.8% per annum. This is reflected in Shanghai's export dependence, which has climbed from 32.4% in 1990 to 85.7% in 2007. This is higher than the ratio for Thailand (61.9%) and close to that for Malaysia (94.3%), which is a trading country.

In 2007, exports from the Shanghai economic sphere reached \$482.0 billion, or 39.6% of the national total (Fig. 1). In 1990, Guangdong Province was China's biggest exporting center, accounting for 35.7% of total exports, while the Shanghai economic sphere contributed only 16.7%. In 2004, the Shanghai economic sphere overtook Guangdong and has remained China's biggest exporting center ever since.

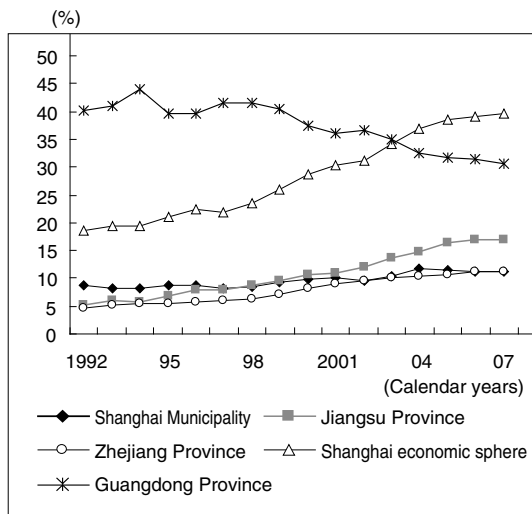
Not only Shanghai but also Jiangsu Province and Zhejiang Province have achieved high export growth. Between 1990 and 2007, their exports increased by an average of 28.6% and 27.5% respectively per year. Their export dependence rose from 9.8% and 11.6% respectively in 1990 to 61.4% and 55.5% respectively in 2007.

Table 3 External Performance of the Shanghai Economic Sphere (1990, 2007)

	Exports				Export Dependence		Foreign Direct Investment Inflows			
	1990		2007		1990	2007	1990		2007	
	(\$100 millions)	(%)	(\$100 millions)	(%)	(%)	(%)	(\$100 millions)	(%)	(\$100 millions)	(%)
All of China	621		12,178		15.9	36.0	31.7		835.2	
Shanghai economic sphere	104	16.7	4,820	39.6	16.0	64.6	3.5	10.9	401.8	48.1
Shanghai Municipality	53	8.5	1,373	11.3	32.4	85.7	1.7	5.5	79.2	9.5
Jiangsu Province	29	4.7	2,077	17.1	9.8	61.4	1.2	3.9	218.9	26.2
Zhejiang Province	22	3.5	1,370	11.2	11.6	55.5	0.5	1.5	103.7	12.4
Bohai Rim economic sphere	29	4.7	684	5.6	17.1	36.1	3.1	9.8	103.4	12.4
Pearl River Delta economic sphere	222	35.7	3,734	30.7	68.1	91.3	14.6	46.1	171.3	20.5
	(\$100 millions)		(\$100 millions)		(%)		(\$100 millions)		(\$100 millions)	
South Korea	650		3,715		24.6	38.3	8.0		105.1	
Thailand	231		1,522		27.0	61.9	24.4		112.4	
Malaysia	294		1,760		66.9	94.3	23.3		84.6	

Source: Compiled using statistics from the *China Statistical Yearbook*, the Asian Development Bank, the IMF and other sources

Fig. 1 The Shanghai Economic Sphere: China's Biggest Exporting Center



Notes: Based on point of origin (manufacture) of export items
 Source: National Bureau of Statistics of China, *China Statistical Yearbook* (various years)

In 2007, exports from the Shanghai economic sphere exceeded the total for South Korea (\$371.5 billion), and export dependence was also high at 64.6%. Foreign-owned enterprises are heavily involved in the region's export trade. Direct investment into the region has increased from just \$400 million (including \$200 million into Shanghai Municipality), or 10.9% of the figure for all of China, in 1990 to \$40.2 billion in 2007, including \$7.9 billion for Shanghai. This is equivalent to 48.1% of all direct investment into China and is higher than the combined total for Thailand and Malaysia. Companies from Japan and Taiwan have particularly high hopes for the Shanghai economic sphere.

(4) Rapidly Expanding Consumer Market and Wealth

The Shanghai economic sphere is also significant as a consumer market. The Chinese consumer market is also expanding at the national level, and the pace of that expansion has attracted world interest in recent years. For example, in 2008, the number of motor vehicles sold in China was 1.8 times higher than the Japanese total at 9.36 mil-

lion. If the U.S. market, which is currently the world's biggest, continues to contract, it is possible that China will emerge as the world's leading market in 2009.

Table 4 analyzes indicators relating to the consumer market of the Shanghai economic sphere. Between 1990 and 2007, retail sales increased 14.9 times, from 120.3 billion yuan to 1,790.0 billion yuan. After deflation to reflect the CPI rate of increase, this is equivalent to an average yearly growth rate of 11.7%, compared with the national average of 9.5% per annum. The region's share of the national total has risen from 14.5% in 1990 to 20.1% in 2007. In other words, the consumer market is growing at an even faster pace than China's rapidly expanding market.

A more detailed picture of market conditions in the Shanghai economic sphere emerges from the results of household budget surveys published by provincial statistical bureaus. This analysis is based specifically on items relating to living standards in household budget survey data included in the statistical yearbook of each province. There are issues with these surveys, including the small size of samples and the fact that their surveys are divided into urban (cities, towns) and rural (townships, villages) categories. However, the data are useful for ascertaining the situation in general terms.

One fact that can be confirmed from the data is that both per capita household incomes and expenditure have both risen dramatically in Shanghai and urban areas of Jiangsu Province and Zhejiang Province. The extent of income growth can be gauged by comparing figures for 1990 and 2007. In Shanghai, income increased by a factor of 10.8 between those years, from 2,182 yuan to 23,623 yuan. In Jiangsu Province, income increased 11.2 times, from 1,464 yuan to 16,378 yuan, while in Zhejiang Province the 2007 figure of 20,574 yuan is 10.6 times higher than the 1990 result of 1,932 yuan. There were similar rises in expenditure over the same period. The figure for Shanghai increased 8.9 times, from 1,937 yuan in 1990 to 17,255 yuan in 2007. In Jiangsu Province, expenditure increased by a factor of 8.0, from 1,339 yuan to 10,715 yuan, while in Zhejiang Province

Table 4 Purchasing Power in the Shanghai Economic Sphere

	Retail Sales				Urban Household Incomes		Urban Household Expenditure		Engel's Coefficient	
	1990		2007		1990	2007	1990	2007	1990	2007
	(100 million yuan)	(%)	(100 million yuan)	(%)	(Yuan/person/year)	(Yuan/person/year)	(Yuan/person/year)	(Yuan/person/year)		
All of China	8,300		89,210		1,510	13,786	1,279	9,998	54.2	36.3
Shanghai economic sphere	1,203	14.5	17,900	20.1	–	–	–	–	–	–
Shanghai Municipality	334	4.0	3,848	4.3	2,182	23,623	1,937	17,255	56.5	35.5
Jiangsu Province	515	6.2	7,838	8.8	1,464	16,378	1,339	10,715	55.5	36.7
Zhejiang Province	354	4.3	6,214	7.0	1,932	20,574	1,604	14,091	55.1	34.7
Bohai Rim economic sphere	448	5.4	5,404	6.1	–	–	–	–	–	–
Beijing Municipality	308	3.7	3,800	4.3	1,787	21,989	1,646	15,330	54.2	32.2
Tianjin Municipality	140	1.7	1,604	1.8	1,639	16,357	1,440	12,029	57.9	35.3
Pearl River Delta economic sphere										
Guangdong Province	667	8.0	10,598	11.9	2,303	17,699	1,984	14,337	57.2	35.3

Source: Compiled using data from the *China Statistical Yearbook* and statistical yearbooks for each province

it rose 8.8 times, from 1,604 yuan to 14,091 yuan.

During this process, Engel's coefficient (food expenditure as a percentage of total expenditure) fell from over 50% to below 30%. Ownership of household goods, such as televisions, washing machines and refrigerators, expanded, and by 2007 almost 100% of urban households possessed these items. Current statistics indicate that ownership of air conditioners, mobile telephones and computers has started to increase rapidly.

Growth in household ownership of consumer durable goods can be ascertained by subtracting numbers of units owned in 2000 from the figures for 2007. This formula yields increases of 22 million units for color televisions, 9 million for refrigerators, 18 million for washing machines and 34 million for air conditioners. The numbers of computers and mobile telephones owned rose by 18 million and 47 million respectively. These figures simply represent changes in numbers of units owned. If replacement demand is also included, the consumer market appears even larger.

However, we also need to be aware that there is significant income disparity within the urban sector, and that the consumer market is not expanding uniformly. Table 5 divides urban and provincial populations into the income strata used in the 2007 household budget survey, though it should be noted that the standards used to classify income levels vary according to the city and province. The average income for the top 20% in Shanghai is 47,149 yuan. This is over three times higher than the 10,297 yuan average for those in the bottom

Table 5 Urban Income Strata (2007)

	(Yuan/person/year)			
	Shanghai Municipality	Jiangsu Province	Zhejiang Province	China
Urban population (millions)	16.48	40.57	28.94	593.79
10%		45,533	51,555	36,785
20%	47,149	26,273	31,342	22,234
30%		18,980	23,518	16,386
40%	27,286			
50%		13,575	17,219	12,042
60%	20,249			
70%		9,758	12,911	8,901
80%	15,131			
90%		6,926	9,533	6,505
100%	10,297	4,456	6,347	4,210
Average	23,623	16,378	20,574	13,786

Source: Compiled using data from statistical yearbooks for each province and other sources

20%. There is similar income disparity in Jiangsu Province and Zhejiang Province.

Of particular interest is the wide gap between the highest average income stratum and the stratum immediately below that level. In Shanghai, the average income of those in the top 20% are 1.7 times higher than those in the next quintile (20-40%). In Jiangsu Province, the average incomes for the top 10% is similarly 1.7 times higher than the figure for the 10-20% stratum, while in Zhejiang Province the multiple is 1.6 times. High-income people are obviously the main drivers of growth in the consumer market. The top quintile in Shanghai and the top decile in Jiangsu Province and Zhejiang Province represent an aggregate

population of 10.25 million⁽⁵⁾.

Assuming that the average household consists of 3.5 people, these figures translate into 2.93 million households with an average household income of 167,000 yuan (approximately \$22,000). Recalculation using the World Bank's purchasing power parity rates⁽⁶⁾ increases this household income figure by a factor of 2.2 to \$46,000, which is higher than the average for a Japanese household.

While this analysis has focused mainly on urban incomes and expenditure, it should be noted that household incomes and expenditure in rural areas of the Shanghai economic sphere are also relatively high. The average per capita yearly income in rural areas of Shanghai Municipality is 10,145 yuan, which is similar to the figure for urban areas in Guizhou Province (10,678 yuan). This indicates that the consumer market in the Shanghai economic sphere is spreading outwards from the urban sector into the rural sector⁽⁷⁾.

II. Development History of the Shanghai Economic Sphere

(1) 1980s: Designation under Reform and Open-Door Policy

We will next examine the development history of the Shanghai economic sphere from a policy perspective. Specifically, we will look at events between the 1980s, when China began to implement its reform and open-door policy in earnest, and 2009, with particular emphasis on the development strategies and concepts of central and regional governments and related policies, and investment by foreign-owned enterprises. By comparing development in this region with development in the rest of China, we will also seek to identify characteristics of the Shanghai economic sphere (Table 6).

By the late 1970s, Shanghai was flourishing as China's biggest industrial city. However, development activity was inadequate because government policies, such as the Third-Front Construction policy, gave priority to inland regions. Furthermore, Shanghai, like Beijing and Tianjin, was positioned

as a major source of government revenues⁽⁸⁾, and freedom under the policy was limited. This situation gradually began to change in the 1980s.

In 1984, the Chinese Communist Party and the State Council (referred to below as the "central government") selected 14 cities as Coastal Open Cities. A total of five cities in the Shanghai economic sphere were chosen, including two in Jiangsu Province (Lianyungang, Nantong) and two in Zhejiang Province (Wenzhou, Ningbo), as well as Shanghai itself. This decision indicated the central government now saw the lower reaches of the Yangtze as an engine for economic growth.

China's open-door policy began with the establishment of four special economic zones in Guangdong Province and Fujian Province in 1980, with the goal of actively introducing foreign money and technology. Under the 1984 policy, this concept was expanded to include Shanghai, Jiangsu Province and Zhejiang Province. The central government gave its approval for foreign-owned companies that moved into economic and technology development zones (industrial parks) established in the open coastal cities to receive the same concessions as were available in special economic zones in Guangdong Province and Fujian Province, including business tax exemptions and reduced tax rates⁽⁹⁾. The regional governments of Shanghai Municipality, Jiangsu Province and Zhejiang Province began to develop economic and technology development zones while actively encouraging foreign-owned companies to move into their regions.

In 1985, the central government designated areas of the Pearl River Delta in Guangdong Province and the Minnan Delta in southern Fujian Province, as well as several cities in the Yangtze Delta⁽¹⁰⁾ (Shanghai, together with Wuxi, Suzhou and Changzhou in Jiangsu Province, and Jiaxing and Huzhou in Zhejiang Province) as coastal open economic zones. Incentives offered by the central government to foreign-owned companies established in the designated areas included 20% reductions in business taxes. In addition, foreign-owned companies that invested in long-term projects worth \$30 million or more were also eligible for a 15% reduction in business tax rates⁽¹¹⁾.

Table 6 Chronology of Policy Measures Relating to the Development of the Shanghai Economic Sphere

Year	Events
1984	<ul style="list-style-type: none"> The CCP Central Committee and the State Council (referred to below as the "central government") select Shanghai, Lianyungang and Nantong in Jiangsu Province, and Wenzhou and Ningbo in Zhejiang Province as Coastal Open Cities.
1985	<ul style="list-style-type: none"> The central government designates the Yangtze River Delta a Coastal Open Economic Zone.
1986-88	<ul style="list-style-type: none"> Three districts in Shanghai Municipality (Minhang, Hongqiao, Caohejing) are designated State-Level Economic and Technology Development Zones.
1988	<ul style="list-style-type: none"> China's first expressway is built in Shanghai.
1990	<ul style="list-style-type: none"> The Pudong development scheme proposed by the Shanghai Municipal government is approved by the central government.
1991	<ul style="list-style-type: none"> The Caohejing Economic and Technology Development Zone is also designated a State-Level High-Tech Industrial Development Zone.
1992	<ul style="list-style-type: none"> At the 14th National Congress of the CCP, then General Secretary Jiang Zemin stated that the development of Pudong would bring prosperity to the entire Yangtze Delta region. A conference of sector leaders from 14 Yangtze Delta cities was held as a forum for the discussion of inter-city cooperation.
1994	<ul style="list-style-type: none"> The China-Singapore Suzhou Industrial Park is established. (This is the first industrial park development project involving a foreign government.)
1996	<ul style="list-style-type: none"> The concept of developing cities in the Yangtze Delta and along the Yangtze River as a single economic zone is approved by the National People's Congress (9th 5-Year Plan).
2001	<ul style="list-style-type: none"> The development of the Pudong New Area is included in the 10th 5-Year Plan.
2005	<ul style="list-style-type: none"> The Shanghai government announces a policy putting quality before quantity when soliciting foreign investment.
2006	<ul style="list-style-type: none"> In addition to the reinforcement of systems in the Pudong New Area and the improvement of its capacity to drive development in the Yangtze Delta region, the 11th 5-year plan also calls for the improvement of the total potential of cities in the region through complementation based on inter-city divisions of labor and cooperation.
2007	<ul style="list-style-type: none"> The governments of one municipality and two provinces (vice-governor level) sign a memorandum on customs clearance collaboration in the Yangtze Delta region. Premier Wen Jiabao convenes a roundtable meeting on economic and social development in the Yangtze Delta region.
2008	<ul style="list-style-type: none"> The Executive Meeting of the State Council adopts a guidance opinion on reform and open-door measures and increased economic and social development in the Yangtze Delta region. The Sutong Bridge and Hangzhou Bay Bridge are completed.
2009	<ul style="list-style-type: none"> The Shanghai government submits a bill calling for the construction of an international finance center to the Shanghai People's Congress. The Executive Meeting of the State Council adopts an opinion "Concerning the Construction of an International Finance Center and Shipping Center in Shanghai". The Executive Meeting of the State Council designates Shanghai and four cities in Guangdong Province (Shenzhen, etc.) as model cities for yuan-denominated trade settlements.

Notes: Taizhou City in Jiangsu Province joined the 1992 council. The Yangtze Delta City Economic Co-operation Forum was established in 1997. Taizhou City in Zhejiang Province became a member in 2003.

Source: Xinhuanet and other media sources

While the incentives were inferior to those available in the special economic zones and economic and technology development zones, the designation of these areas as coastal open economic zones expanded the scope of the foreign investment introduction policy from individual points in the form of special economic zones and economic and technology development zones to entire geographical areas encompassing multiple cities⁽¹²⁾. The selection of Yangtze Delta as a coastal open economic zone at the same time as Guangdong Province and other areas would have

an important influence on the evolution of the Shanghai economic sphere.

Initiatives during the 1980s were generally localized, and there was no direct lineage to the development of economic spheres encompassing multiple provinces and direct-controlled municipalities. However, by creating an environment conducive to investment by foreign-owned businesses, the government laid foundations for the rapid development of the Shanghai economic sphere in the 1990s and beyond.

(2) 1990s: Accelerated Economic Development Driven by Foreign Capital Inflows

Interest in the development of Shanghai, Jiangsu Province and Zhejiang Province intensified rapidly in the early 1990s. The impetus came from two factors.

First, the Pudong Area Development scheme was launched in Shanghai. A previously undeveloped area on the east side of the Huangpu River was turned into a trade and finance center and modern housing area. The project had been proposed by Shanghai Government itself as a way of revitalizing the city⁽¹³⁾.

Interestingly, the Central Government continued to promote the development of Pudong even after it had approved the project in 1990. This was because the central government had started to become keenly aware that the development of Pudong would give Shanghai the potential to drive development in the Yangtze Delta and throughout the Yangtze Basin. For example, then General Secretary Jiang Zemin stated at the 14th National Congress of the CCP (in 1992) that the government intended to make the development and opening of the Pudong district of Shanghai the nucleus of a program that would also include the establishment of more open cities along the Yangtze river and the rapid development of Shanghai as an international economic, financial and trade center that would trigger a new phase of economic prosperity by acting as a driving force for the Yangtze Delta and the entire Yangtze Basin.

The central government and the Shanghai Municipal government shared this vision of the development of Shanghai (the Pudong district) as a finance and trade center. The scope of open-door policies implemented during this period was wider than in the 1980s. For example, bonded areas were established in Pudong, and foreign-owned financial institutions were allowed to open offices there. In 1990, the Shanghai Stock Exchange opened its doors in Pudong and began to function as China's biggest stock market⁽¹⁴⁾. The Port of Shanghai meanwhile grew into one of the world's leading ports in terms of cargo volumes and was soon the biggest in the world based on simple

volumes. In addition, large number of foreign financial institutions opened offices in Shanghai⁽¹⁵⁾. Shanghai's evolution as a service economy accelerated the shift of manufacturing industries in neighboring Jiangsu Province and Zhejiang Province, and the economies of both provinces flourished because of their status as the hinterland for Shanghai (See Part III).

Second, the renewed acceleration of the reform and open-door policy provided additional impetus for the shift to offshore operations on the part of foreign companies.

During the late 1980s and early 1990s, the central government maintained a tight macroeconomic stance and was reluctant to expand its open-door measures. This cautious stance was prompted by a steep inflationary trend triggered by the rapid pace of reform and open-door measures. It was also a response to political and social unrest, as symbolized by the Tiananmen Square incident of June 1989.

However, Deng Xiaoping, who was then the most powerful man in China, became increasingly concerned about the economic stagnation that inevitably resulted from this stance. During a tour of southern China in January and February 1992, he stated in his "speeches during a visit to the south" that China should accelerate its reform and open-door line, even if that meant accepting reasonable risks. The CCP did an about-face and began to accelerate market Chinas' transition to a market economy basis by implementing measures designed to encourage foreign investment inflows. Measures affecting the Shanghai economic sphere included the establishment of the China-Singapore Suzhou Industrial Park in 1994 under an agreement with the government of Singapore.

Japanese companies were meanwhile moving more and more of their production operations offshore to counter the effects of the rising value of the yen in the wake of the Plaza Accord. This trend began in labor-intensive industries, notably the textile industry. Eventually companies across the entire manufacturing sector, and more recently even those in tertiary industries such as retailing and finance, would begin to see China—especially Shanghai, Jiangsu Province and Zhejiang Prov-

ince—as important locations for their business strategies. This shift was motivated not only by the need to reduce production costs, but also by the desire to develop consumer markets.

In 1990, the Taiwanese government lifted its ban on investment in China through third countries and regions, and Taiwanese companies stepped up their development of business operations in China. Compared with alternative regions, China was seen as offering better growth potential as a market and a deeper pool of engineers. These factors, together with the easing of Taiwan's restrictions on high-tech investment in China, led Taiwanese capital to establish large number of contract manufacturing facilities for notebook computers and semiconductors between Shanghai and Suzhou. The presence of these facilities attracted related companies from other countries into the region, further raising the profile of the Shanghai economic sphere as an area with a high concentration of electrical and electronic industries (Seki, M. [2005], Mukoyama, H., Sano, J. [2007]).

(3) 2000s: Formation and Implementation of Frameworks for Economic Development

During this process, major cities in the Shanghai economic sphere (Shanghai and two provinces) began to form frameworks for cooperation and consultation. As early as the 1980s, there were forums for city leaders (mayors) and managers in the Yangtze Basin. For example, an economic cooperation forum for key cities along the Yangtze began to hold meetings in 1985. However, its membership was wide-ranging and even included cities in the middle reaches of the Yangtze, such as Chongqing and Wuhan. As a result, there were not sufficient opportunities for discussions of cooperation limited to specific regions, such as links among major cities in Shanghai Municipality, Jiangsu Province and Zhejiang Province.

There were further initiatives in the 1990s. In 1992, a conference of sector leaders from 14 Yangtze Delta cities was held as a forum for the discussion of inter-city cooperation. When Taizhou City in Jiangsu Province joined in 1997, it

was renamed the Yangtze Delta City Economic Cooperation Forum. This organization is still in existence today. It has a permanent secretariat and functions as a forum for regular meetings among major cities in the Shanghai economic sphere. According to explanatory articles on the official Xinhuanet site and other sources, the meetings were initially held every two years but have been convened annually since 2004.

This growth in cooperation among key cities appears to have prompted the signing of a number of agreements, including an agreement on closer cooperation on customs clearance systems in Shanghai, Jiangsu Province and Zhejiang Province, and an agreement between Shanghai and Hangzhou City, Zhejiang Province covering cooperation in seven areas, including the Shanghai Expo, infrastructure development and environmental protection. Both agreements were signed in 2007. The Yangtze Delta City Economic Cooperation Forum has created a number of cooperation frameworks, including structures to promote cooperation among mayors and in specific sectors. According to Akinori Myoi [2008] it has contributed to better understanding and communication among Shanghai, Jiangsu Province and Zhejiang Province.

In the early 2000s, the emphasis was on the continuation of existing policies, notably the Pudong development scheme. However, as the government began to formulate the 11th 5-Year Plan (2006-2010), central and regional governments both adopted policy programs and concepts that defined the future direction of development in the Shanghai economic sphere. In the 11th 5-Year Plan, the central government specifically referred to the Yangtze Delta as a region with a highly developed group of cities, ranking it alongside the Pearl River Delta area and the Beijing-Tianjin-Hebei Province area. It also called for the strengthening of the Yangtze Delta's economic traction potential, and for the improvement of overall competitiveness through divisions of labor and industrial cooperation among the cities.

In August 2008, the Executive Meeting of the State Council, which consists of senior ministers, adopted a “guidance opinion” on reform and open-door measures and increased economic and

social development in the Yangtze Delta region. This opinion, which was made public in September, defined the Yangtze Delta as the region that includes Shanghai Municipality, Jiangsu Province and Zhejiang Province. In China the Yangtze Delta is normally defined as consisting of 16 major cities in Shanghai, Jiangsu Province and Zhejiang Province. However, the opinion included no exceptional provisions and also encompassed initiatives targeting municipalities other than the 16 cities, including the development of Lianyungang in Jiangsu Province, and the expansion of small and medium-sized cities.

The opinion also included three major goals for the future development of the region: (1) the development of internationally competitive world-class cities, (2) the establishment of key international gateways in the Asia-Pacific region, and (3) the establishment of production centers for the world's advanced manufacturing industries. These goals reflect the government's determination to support the development of Shanghai, Jiangsu Province and Zhejiang Province.

In 2009, the Executive Meeting of the State Council has announced concepts calling for Shanghai's evolution into a world finance and trade center. For example, on March 25, the Standing Committee adopted an opinion "Concerning the Construction of an International Finance Center and Shipping Center in Shanghai," as referred to in the guidance opinion. This opinion identified five priorities for Shanghai's development as an international finance and shipping center by 2020, including further opening up of the financial sector to foreign participation, and increased cooperation among ports in the Yangtze Delta⁽¹⁶⁾.

In April, Shanghai was designated as a model city for yuan-denominated trade settlements, alongside Shenzhen and three other cities in Guangdong Province, and measures were implemented to achieve this goal. In addition to Shanghai, Jiangsu Province and Zhejiang Province have also launched their own initiatives.

The municipal government of Shanghai has adopted a ordinance stipulating measures to facilitate the construction of an international finance center in Shanghai. It has also signaled a shift in

emphasis from quantity to quality in its policies on the solicitation of foreign investment. Lianyungang City in Jiangsu Province has announced that it will cooperate more closely with Shanghai on port-related policies. Huaian City, also in Jiangsu, has indicated that it will accept industries relocated from major cities in the Yangtze Delta.

III. Geographical Expansion and Rising Added Value in the Shanghai Economic Sphere

As shown in Part I, the GRP of the Shanghai Economic Sphere has risen from 16.6% of the total for China in 1990 to 19.6% in 2000 and 22.0% in 2007. Per capita GRP has meanwhile soared from \$533 in 1990 to \$1,727 in 2000 and \$5,128 in 2007. According to the World Bank definitions cited earlier in this article, the Shanghai Economic Sphere has advanced from the level of a low-income country to that of a lower middle-income and then a higher middle-income country over a period of less than 20 years.

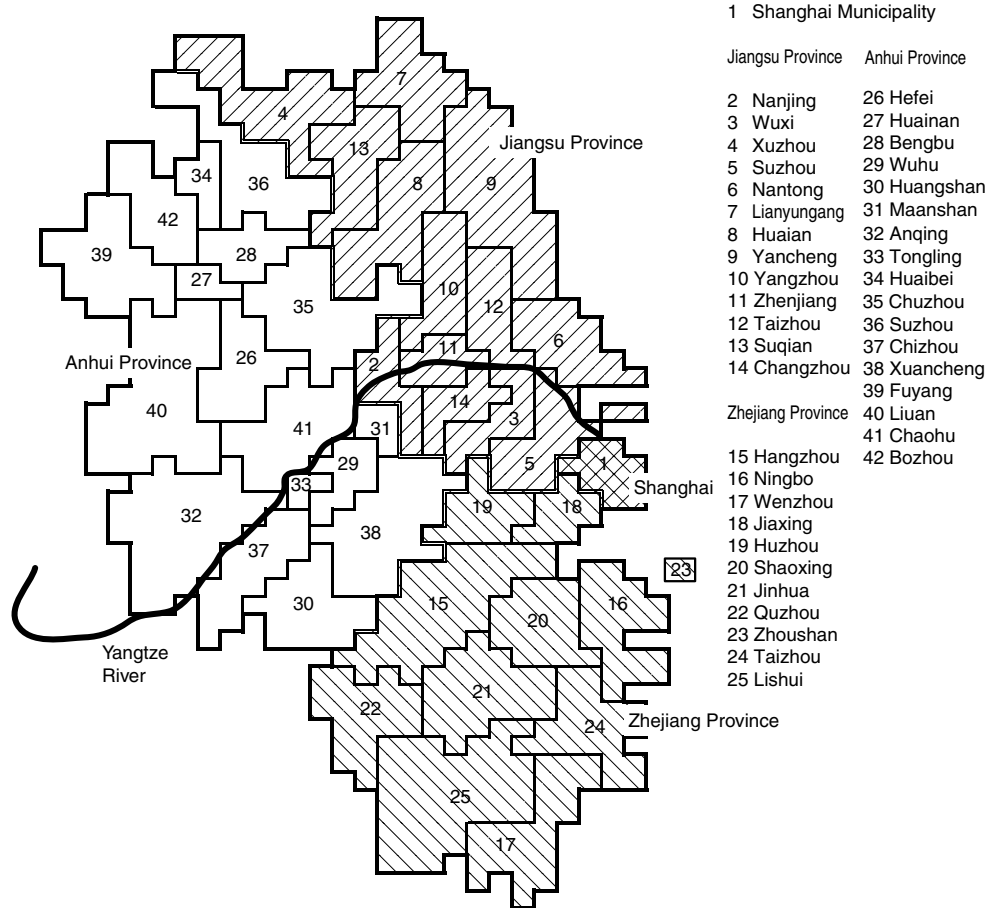
However, the Shanghai Economic Sphere, which centers on Shanghai Municipality, covers an area with a population of 140 million, and the economic growth has not occurred uniformly throughout this region. In Part III we will examine the way in which the Shanghai Economic Sphere has expanded. We will also examine regional variation in the added value of manufacturing, services and other activities. To ascertain the geographical extent of Shanghai Economic Sphere, we divided Jiangsu Province and Zhejiang Province into prefecture-level cities⁽¹⁷⁾. We also included Anhui Province, which adjoins Jiangsu Province and Zhejiang Province, in the survey.

The area examined in Part III consists of Shanghai and 42 prefecture-level cities, of which 13 are Jiangsu Province, 11 in Zhejiang Province and 17 in Anhui Province (Fig. 2).

(1) Geographical Expansion

We will begin our analysis of the characteristics of the Shanghai Economic Sphere by looking at

Fig. 2 Administrative Divisions in Shanghai Municipality, Jiangsu Province, Zhejiang Province and Anhui Province (Prefecture-Level Cities)



per capita GRP. Fig. 3 traces changes in per capita GRP between 2000 and 2007. The different tones of shading represent areas where per capita GRP is less than 10,000 yuan (approximately \$1,500), 10,000 yuan or higher but less than 20,000 yuan (approximately \$3,000), 20,000 yuan or higher but less than 40,000 yuan (approximately \$6,000) and 40,000 yuan or higher.

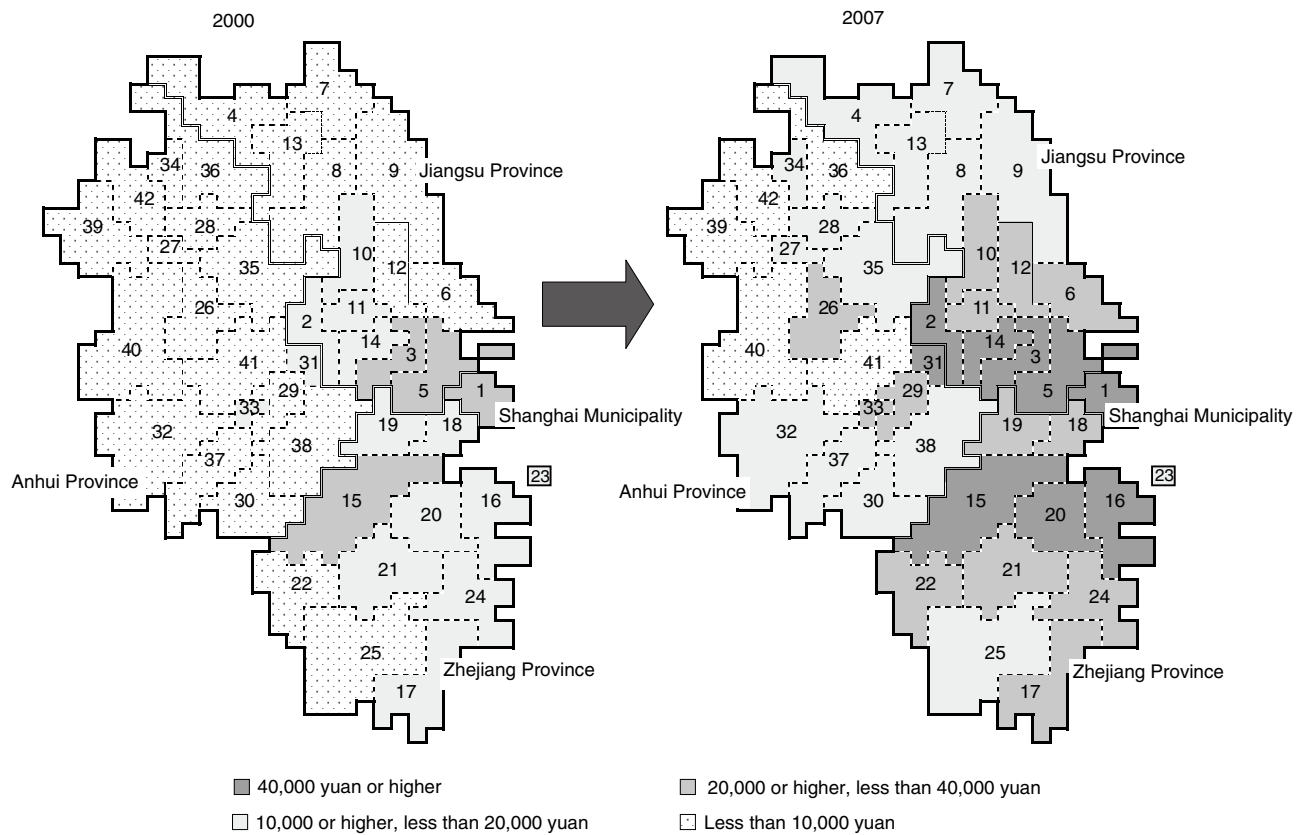
In 2000, the only areas where per capita GRP was over 20,000 yuan were Shanghai and three prefecture-level cities: Wuxi (Jiangsu Province), Suzhou (Jiangsu Province) and Hangzhou (Zhejiang Province). There was nowhere in the region with per capita GRP in excess of 40,000 yuan. Per capita GRP was below 10,000 yuan in nine of the 24 prefecture-level cities in Jiangsu Province and Zhejiang Province, and in 15 prefecture-level cities in Anhui Province, where the only exceptions were Maanshan and Tongling. Only a limited

number of regions could be classed as belonging to the Shanghai Economic Sphere, and income levels remained low in other areas.

Subsequent economic development was accompanied by the geographical expansion of the Shanghai Economic Sphere. By 2007, the number of prefecture-level cities with per capita GRP above 20,000 yuan had risen to 18 out of a total of 24 prefecture-level cities in Jiangsu Province and Zhejiang Province. Furthermore, per capita GRP had risen above 40,000 yuan in eight cities, including Shanghai itself and seven prefecture-level cities (Wuxi, Suzhou, Hangzhou, Changzhou, Nanjing, Ningbo, Shaoxing). Income was especially high in Shanghai (65,600 yuan), Suzhou (64,600 yuan) and Wuxi (64,400 yuan).

As shown in Fig. 3, the upward trend in per capita GRP has spread out laterally from Shanghai to the north, west and south. According to

Fig. 3 Per Capita GRP in the Shanghai Economic Sphere



Richard Florida [2008], the capacity to drive the world economy is a characteristic not of a megacity, which drives expansion in the area around a single city, but rather a megaregion, which is an expanding economic sphere in which a core city absorbs other cities. The area centering on Shanghai, where per capita GRP has risen above 20,000 yuan, has become an economic sphere that clearly merits classification as a megaregion. According to United Nations statistics, this area has 17 cities with populations in excess of 1 million.

Of particular interest is the fact that the area has spread to Maanshan and Tongling in Anhui Province, where per capita GRP has risen to 41,900 yuan and 39,800 yuan respectively. For the purposes of this article, the Shanghai Economic Sphere has been defined as consisting of Shanghai, Jiangsu Province and Zhejiang Province. However, these other two cities should perhaps also be included. As noted in Part II, the Chinese government aims to expand the scope of the Yang-

tze Delta to include all prefecture-level cities in Jiangsu Province and Zhejiang Province. However, the economic level of five prefecture-level cities in northern Jiangsu Province is low, even though their per capita GRP is above 10,000 yuan, indicating that these cities may have been left behind by the development occurring in surrounding areas. (This aspect will be reexamined in Part IV.)

While Anhui Province includes prefecture-level cities where per capita GRP is above 20,000 yuan, the areas of Jiangsu Province and Zhejiang Province that remain after prefecture-level cities with per capita GRP below 20,000 yuan are excluded (Shanghai and 22 prefecture-level cities) have a total population approximately 20 million smaller than that of the Shanghai Economic Sphere at 121.87 million, but the per capita GRP of these areas is about 5,000 yuan higher at 44,100 yuan (approximately \$5,800). If the scope is further narrowed to areas with per capita GRP above 30,000 yuan (Shanghai and a total of 14 prefecture-level

cities), the population shrinks to 83.26 million, but per capita GRP is about 8,000 yuan higher at 51,700 yuan (approximately \$6,800).

(2) Manufacturing and Service Industry Development and Geographical Characteristics

The development and geographical expansion of the Shanghai Economic Sphere has been driven by industrialization. In 2000, the industrialization ratio (the percentage contribution of manufacturing industries to GRP⁽¹⁸⁾) for the Shanghai Economic Sphere was already high at 50.9%, and by 2007 it had risen to 53.1%. Over the same period, the Shanghai Economic Sphere's share of total manufacturing activity in China has increased from 21.8% to 24.1%.

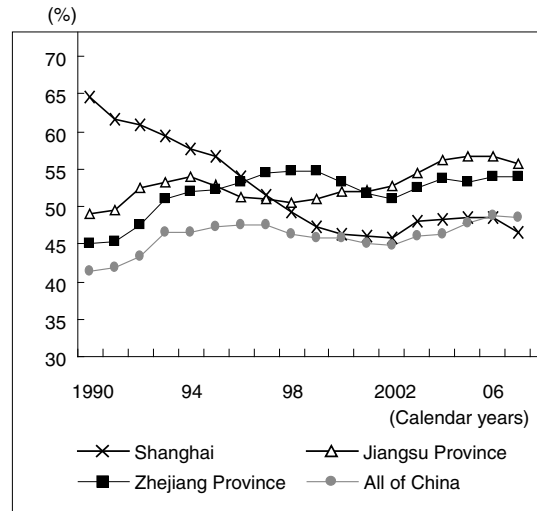
A more detailed analysis reveals that the industrialization ratio for Shanghai itself is falling, while the ratios for Jiangsu Province and Zhejiang Province are rising. This indicates that the focus of manufacturing activity is shifting from Shanghai to Jiangsu Province and Zhejiang Province (Fig. 4).

For example, crude steel production has remained basically static in Shanghai but has expanded dramatically in Jiangsu Province. Jiangsu Province is replacing Shanghai as the region's main center for steel production (Fig. 5).

The Shanghai Economic Sphere is the main driver of chemical fiber production in China. The production shares of Jiangsu Province and Zhejiang Province continue to rise, and in 2007 the Shanghai Economic Sphere accounted for almost 80% of China's total output (Fig. 6). In 1990, Shanghai and Jiangsu Province were by far the biggest producers, accounting for around 40% of total production in China. Shanghai's output has risen only gradually since that time, but there has been significant growth in Jiangsu Province and Zhejiang Province. In 2007, Zhejiang Province accounted for 40.3% of China's total output and Jiangsu Province for 34.5%. Together, the two provinces produced 75% of China's total chemical fiber output.

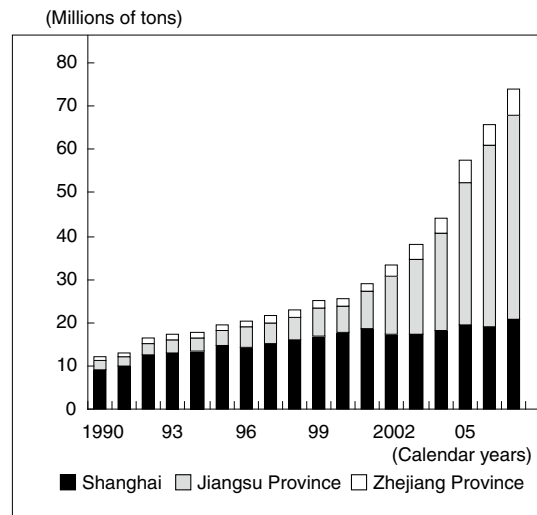
Around 60% of all integrated circuits produced

Fig. 4 Industrialization Ratios for Shanghai, Jiangsu Province and Zhejiang Province



Notes: The ratios were calculated as the contributions of manufacturing industries to GRP (GDP).
Source: Shanghai Statistical Yearbook, Jiangsu Statistical Yearbook, Zhejiang Statistical Yearbook, etc.

Fig. 5 Crude Steel Production

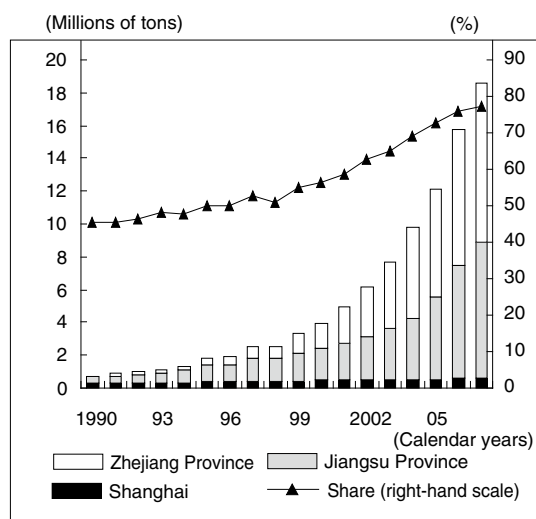


Source: China Statistical Yearbook (various years)

in China are made in the Shanghai Economic Sphere (Fig. 7). Shanghai's share of production has fallen from 40.7% in 2000 to 21.6% in 2007, while that of Jiangsu Province has risen. However, Shanghai is still the second biggest producer and remains a major production center.

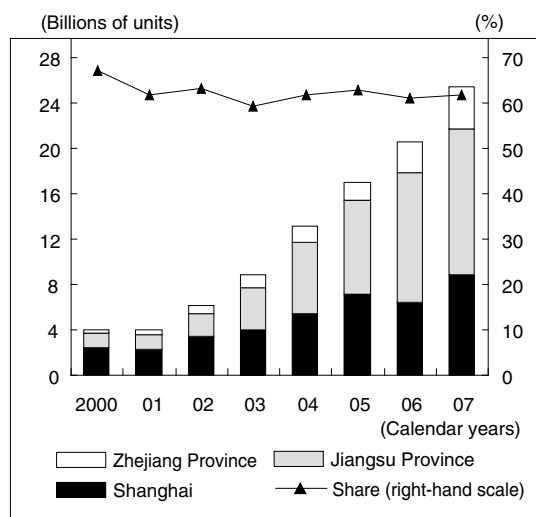
This shift in the focus of manufacturing activity from Shanghai to Jiangsu Province and Zhejiang Province has been accompanied by an improve-

Fig. 6 Chemical Fiber Production



Notes: Share = (production in Shanghai + Jiangsu Province + Zhejiang Province)/total national production
 Source: *China Statistical Yearbook* (various years)

Fig. 7 Integrated Circuit Production



Notes: Share = (production in Shanghai + Zhejiang Province + Jiangsu Province)/total national production
 Source: *China Statistical Yearbook* (various years)

ment in Shanghai's industrial productivity. In 2007, Shanghai led in terms of the per capita added value of its manufacturing work force (165,700 yuan). This is significantly higher than the 143,100 figure for Maanshan (Anhui Province), which was ranked second. Tongling (Anhui Province) was in third place at 129,500 yuan, while the cities of Wuxi and Suzhou in Jiangsu Province were ranked fourth and fifth respectively (Fig. 8).

Industrialization has made a major contribution to economic development in Maanshan, Anhui Province. Other cities with high added value figures include Tongling and Wuhu. This indicates that the upward trend in added value resulting from industrialization is spreading westwards along the Yangtze.

There have also been interesting developments in the service sector. While China as a whole is still in the midst of the industrialization process, the Shanghai Economic Sphere has already started to evolve into a service-based economy. The added value generated by service industries has risen from 28.4% of GRP of Shanghai Economic Sphere in 1990 to 40.0% in 2000 and 41.7% in 2007. At the national level, the contribution has climbed from 15.0% to 20.1% and 22.8% over the same period.

In developing countries, the shift to a service-based economy does not always signify a transition to an industrial structure with higher added value. This is particularly true in cities in developing countries in which the economy is dominated by the informal sector. In such environments, added value remains low despite the shift to a service-based economy.

However, the evolution of the Shanghai Economic Sphere into a service-based economy has also brought a rise in added value. The per capita added value of service sector workers has risen from 36,000 yuan in 2000 to 76,000 yuan in 2007, and the 2007 figure is equivalent to 1.9 times the national average. This rise in added value has been especially conspicuous in service industries in Shanghai. In 1999, the added value of service industries exceeded that of manufacturing industries, and the service sector accounted for over one-half of GRP. In 2008 the service sector contributed 53.7% of GRP, compared with a 45.5% contribution from the manufacturing sector (Fig. 9).

The sectors that are achieving conspicuous growth in Shanghai are finance, transportation and distribution. Shanghai's stock market is the biggest in China and ranks second in Asia after Tokyo in terms of trading volume. There is also substantial trading in gold and diamonds. The GRP of the

Fig. 8 Per Capital Added Value of Manufacturing Employed Workforce (2007)

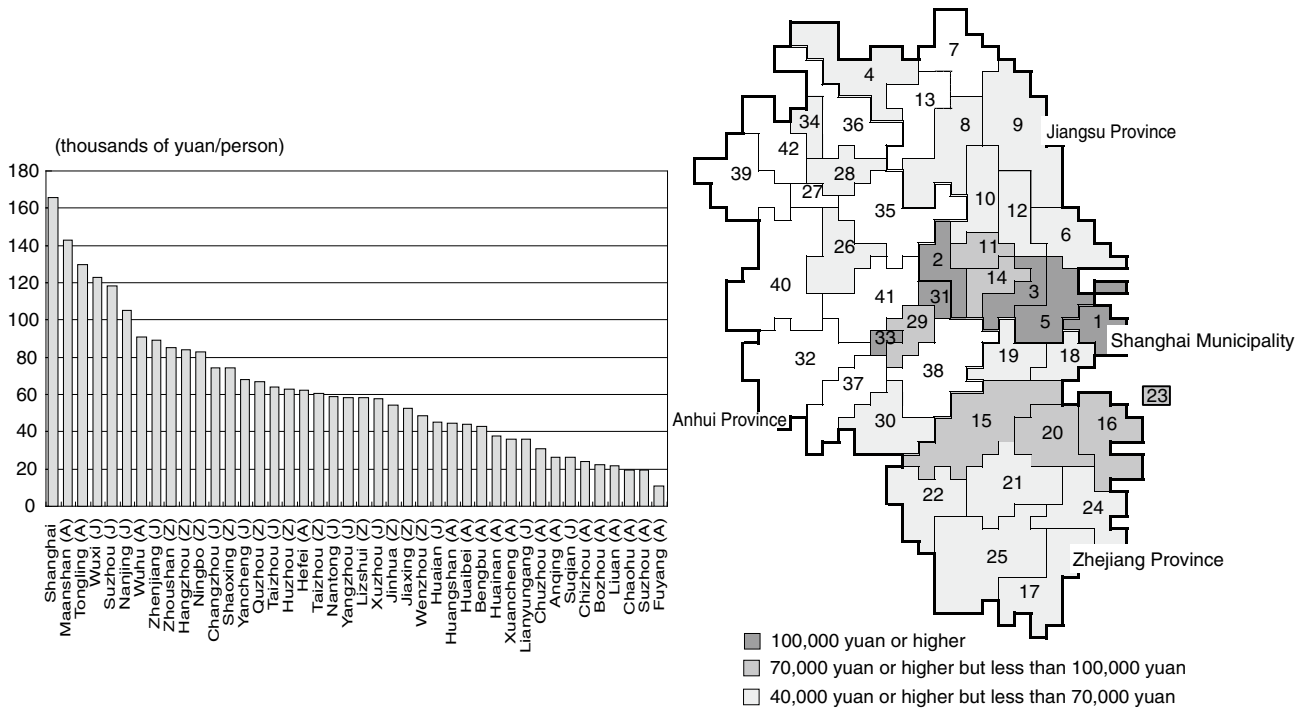
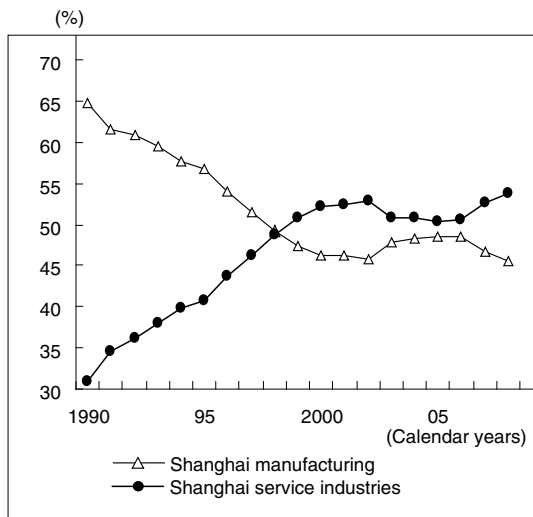


Fig. 9 Shanghai's Evolution as a Service-Based Economy



Notes: Each sector's contribution is calculated as a percentage of GRP.
 Source: *Shanghai Statistical Yearbook, China Statistical Abstract (2009)*

financial sector has risen from 66.7 billion yuan in 2000 to 120.9 billion in 2007. Over the same period, the number of people employed in the sector has increased from 100,000 to 220,000 (Table

7). At 560,000 yuan, per capita added value in the financial sector is over four times higher than the service industry average. Other service industries that now play a core role in the Shanghai Economic Sphere include transportation, distribution, telecommunications and business services.

There have also been changes in the distribution sector as a result of the rapid expansion of consumer markets. One example is the rapid proliferation of supermarkets and convenience stores. The number of outlets operated by retail chains has risen from 28,000 in 2005 to 45,760 in 2007. This total, which is equivalent to 31.5% of the national total, breaks down into 16,470 outlets in Shanghai, 11,778 in Jiangsu Province and 17,512 in Zhejiang Province.

An analysis of the geographical distribution of per capita added value in service industries shows that Suzhou (Jiangsu Province) leads at 138,200 yuan, followed by Wuxi (Jiangsu Province) at 136,100 yuan and Shanghai at 125,000 yuan. Levels in these three adjoining areas are substantially higher than in other regions. In contrast with manufacturing industries, the geographical expansion

in the service sector has followed a north-south direction (Fig. 10).

(3) Limits of Geographical Expansion Resulting from Migration

As noted earlier in this article, an analysis focusing on prefecture-level cities has confirmed that the geographical area in which income levels are high in real terms is expanding laterally

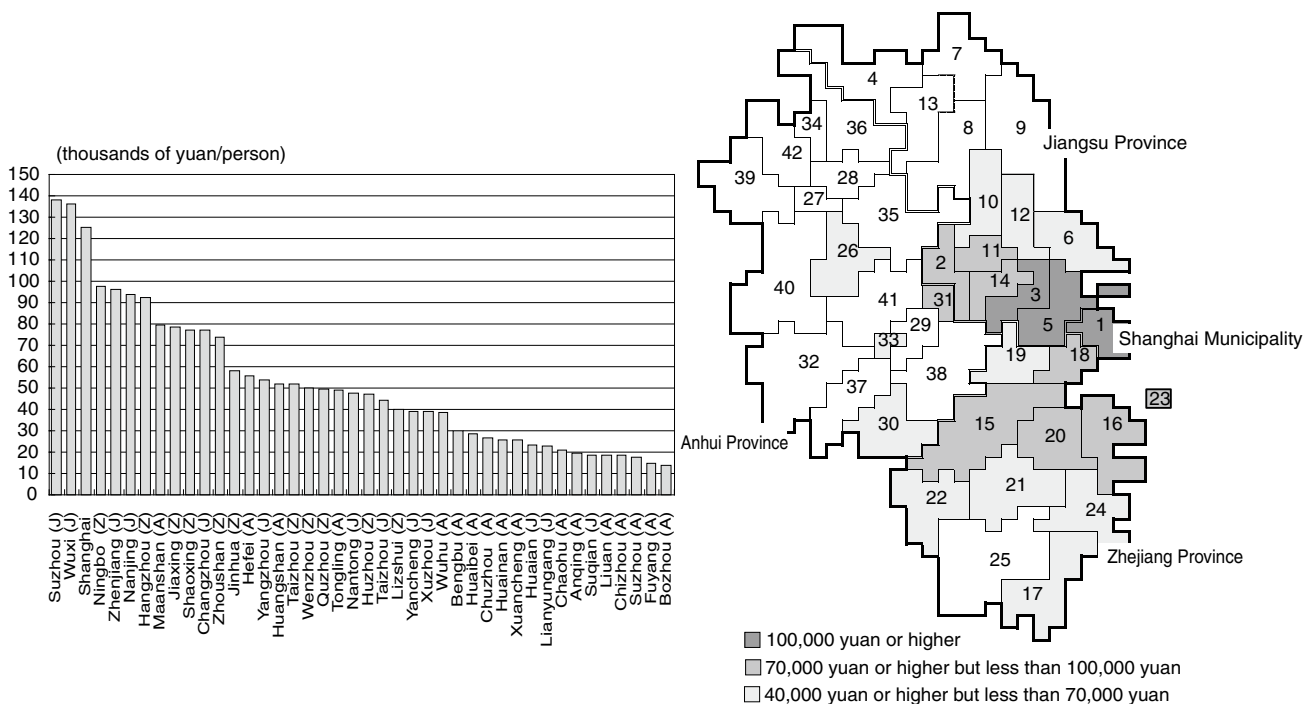
in the Shanghai Economic Sphere. However, it is also apparent that the Shanghai Economic Sphere does not encompass the entire areas of Jiangsu Province and Zhejiang Province. Even in Jiangsu Province and Zhejiang Province, there are still areas where per capita GRP is below 20,000 yuan. Interestingly, while income levels in Anhui Province are low in terms of provincial statistics, there are prefecture-level cities close to Shanghai where GRP is rising rapidly.

Table 7 The Growth of the Service Sector in Shanghai

	Service GRP (billions of yuan)			Employed Population (thousands)			Per Capita GRP of Working Population (thousands of yuan)		
	2000	2004	2007	2000	2004	2007	2000	2004	2007
Transportation and distribution	31.5	49.4	72.3	370	480	500	86	103	145
Wholesaling and retailing	48.5	74.5	107.8	1,060	1,260	1,320	46	59	82
Hotels and restaurants	–	15.1	21.9	–	230	250	–	65	88
Finance	66.7	61.2	120.9	100	160	220	664	385	560
Real estate	25.2	66.6	80.7	90	290	310	270	230	256
Leasing and business services									
Others	58.5	142.9	237.2	2,100	2,120	2,530	28	67	94
Total	230.4	409.7	640.9	3,720	4,540	5,130	62	90	125

Source: Shanghai Statistical Yearbook

Fig. 10 Per Capita Added Value of the Service Sector Working Population (2007)



Source: Compiled using data from statistical yearbooks for each province (various years)

We also need to examine the geographical expansion of the Shanghai Economic Sphere from a demographic perspective. As described in Part I, the population inflow into the Shanghai Economic Sphere between 2000 and 2005 is estimated at 11.37 million. Migration data are not published for individual prefecture-level cities, so this analysis will be based on average yearly rates of increase in the resident populations of Shanghai and prefecture-level cities in Jiangsu Province, Zhejiang Province and Anhui Province.

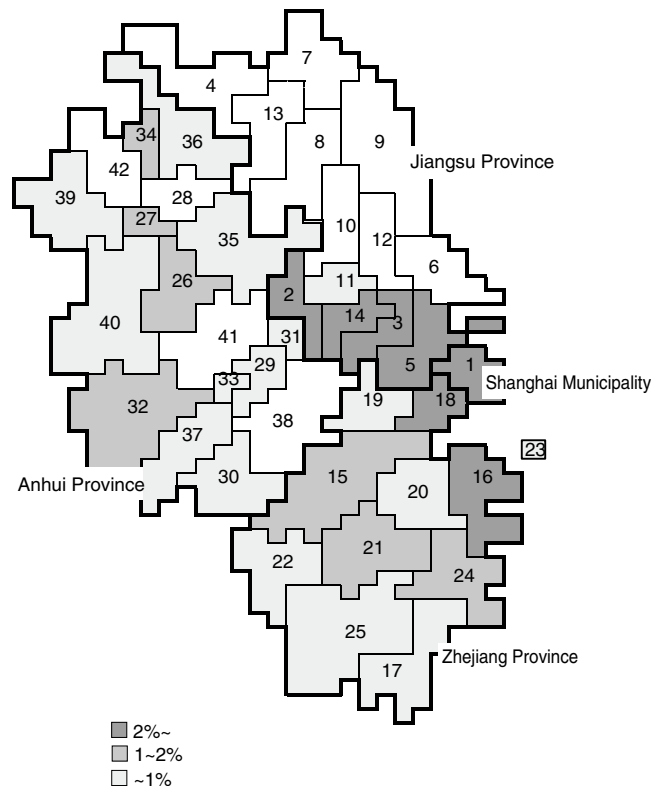
In general, cities where rapid development is occurring, such as Shanghai and Suzhou, tend to have low birthrates, and without population inflows there population growth rates would probably be low also. In areas where the pace of development is slower, birthrates tend to be relatively high. Without population outflows, these areas would be expected to have relatively high population growth rates.

However, an analysis of the geographical distribution of population growth rates produces the exact opposite results (Fig. 11). In the area around Shanghai, where income levels are high, the average yearly population growth rate is over 2%. In Suzhou, the growth rate is above 3%. In contrast, Anhui Province and northern Jiangsu Province, where income levels are low, have low population growth rates, and populations are actually in decline in eight prefecture-level cities in northern Jiangsu Province.

While detailed surveys would be needed to confirm these findings, we can conclude that the most important factor involved is extremely large-scale migration from low-income regions into high-income centers. This migration is likely to influence the future geographical expansion of the Shanghai Economic Sphere. The following analysis is based on the example of Anhui Province, which was the source of approximately 30% (4 million people) of the population inflow into the Shanghai Economic Sphere⁽¹⁹⁾.

Fig. 12 shows the population pyramids for Anhui Province and the Shanghai Economic Sphere. In Anhui Province, the number of young workers aged 20-34 is extremely low, indicating that there has been large-scale outward migration in that

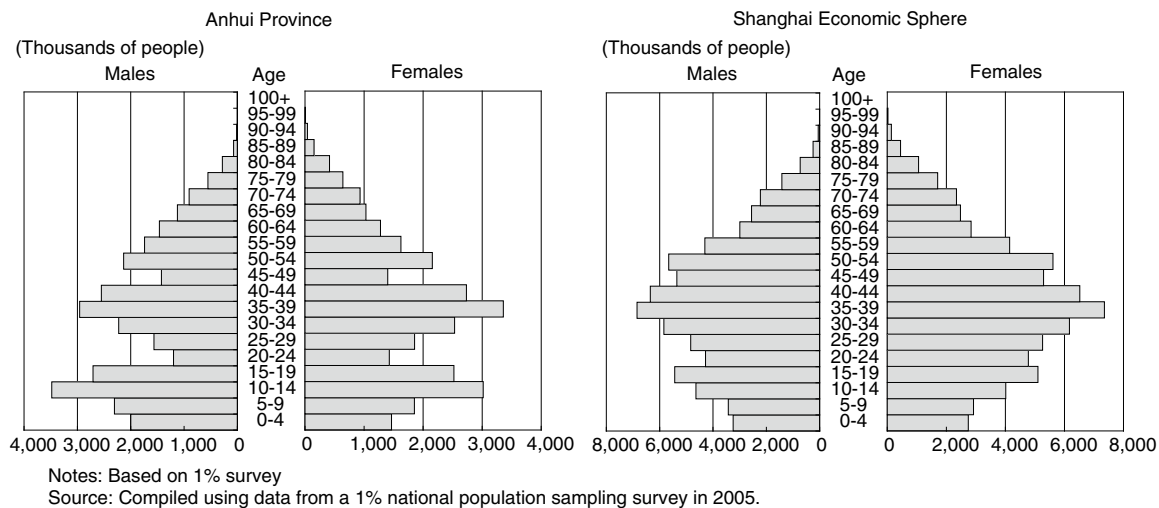
Fig. 11 Average Yearly Population Growth Rates (2000-2007)



age group. The economic development occurring in the Shanghai Economic Sphere has spread to some areas of Anhui Province, but this phenomenon is unlikely to encompass the entire province. A similar pattern appears to be occurring within Jiangsu Province.

Five prefecture-level cities in northern Jiangsu Province have per capita GRP below 20,000 yuan and are also experiencing population declines. Significant depopulation appears to have occurred in the region. It is possible that the Shanghai Economic Sphere will not even be able to encompass the whole of Jiangsu Province. Although only four prefecture-level cities in Anhui Province are experiencing population declines, many prefecture-level cities have population growth rates below 1%. Since Anhui Province has a relatively high birthrate, this means that migration is playing a significant role. The Shanghai Economic Sphere may be approaching the limits of its geographical expansion.

Fig. 12 Demographic Structures of Anhui Province and the Shanghai Economic Sphere (2005)



IV. Prospects and Challenges for the Shanghai Economic Sphere

The Shanghai Economic Sphere forms an economic area that should be viewed as a national economy in its own right, but assessments need to be based on indicators different from those used at the national level. The area is expanding, and added value is increasing rapidly in the core of the region.

Some of the characteristics that differentiate the Shanghai Economic Sphere from other regions have also made it more vulnerable to fluctuations in the world economy. It has been severely affected by the increasingly serious economic downturn that began in the autumn of 2008. In the January-March quarter, Shanghai's exports declined by 20.5% compared with same period in 2008, and Jiangsu Province and Zhejiang Province recorded declines of 23.2% and 15.4% respectively. This caused the real GDP growth rates for Shanghai and Zhejiang Province to fall to 3.1% and 3.4% year respectively in the January-March quarter, compared with the national average of 6.1%. (Jiangsu Province maintained a high growth rate of 10.2%).

Yet the fact the Shanghai Economic Sphere maintained positive growth rates while other heavily export-dependent economies, such as South

Korea, Taiwan, Thailand and Malaysia, slid into negative figures, is an indication of the region's strong growth potential. Reasons for this strength include the strong growth potential of domestic demand in the Shanghai Economic Sphere, and its strong economic relationships with other regions that have maintained high growth. When the world economy starts to recover, there is a strong possibility that the Shanghai Economic Sphere will emerge as a mega-region with the potential to drive the world economy.

As noted in Part III(3), however, it will probably become increasingly difficult for the Shanghai Economic Sphere to maintain its price competitiveness by importing labor from other provinces. In this sense, the region's ability to achieve sustainable economic development will depend to a large extent on the improvement of the added value of its industries.

On April 29, 2009, the State Council published the full text of its opinion on "Accelerating the Development of Modern Service Industries and Advanced Manufacturing Industries and the Establishment of an International Financial Center and Shipping Center in Shanghai" (the official name of the aforementioned opinion "Concerning the Construction of an International Finance Center and Shipping Center in Shanghai"). This opinion calls for the construction, by 2020, of an international finance center and an international

shipping center commensurate with the real potential of the Chinese economy and the international status of the renminbi.

The urban economist Saskia Sassen has identified four functions for mega-cities in a globalized world. The first is the ability to act as control towers for global businesses, including multinationals. The second is the provision of advanced, specialized services, including financial services. The third is the capacity to accelerate innovation. And the fourth is the existence of markets to consume these goods and services (Sassen, S. [2001]).

Although we can conclude that Shanghai is evolving from the hub of the world's factory into a global city, the initiatives needed to drive that transition have barely begun. The concept of developing Shanghai into an international financial center has met with persistent criticism about China's closed financial systems. There are also inadequacies in the legal system. Furthermore, Inagaki [2009] reports that despite a rapid increase in the financial sector work force, there is still a shortfall of around 1 million people.

On April 29, the National Development and Reform Commission responded to these issues by identifying four measures relating to Shanghai's development as an international financial center: (1) the establishment of minimally regulated market mechanisms; (2) the development of internationally competitive financial systems; (3) the training of specialists in a wide range of fields; and (4) the development of a legal system capable of accommodating the demand for economic development.

If Shanghai can evolve into a global city, it will be able to obtain not only technology and capital, but also human resources in international markets. One of the keys to survival in competition with other cities in a global era will be the ability to attract talented human resources from other countries. In addition to efforts to strengthen Shanghai's own competitiveness, it will also be necessary to improve Shanghai's image in other countries. The Shanghai Expo scheduled for 2010 will play an important role from this perspective.

Like the Beijing Olympic Games, the Shanghai Expo is regarded as a major national event.

The determination of the current administration to ensure the success of the Expo is reflected in the composition of the Organizing Committee. The committee is chaired by Vice-Premier Wang Qishan, who is also a member of the Political Bureau of the CPC Central Committee. Other members include senior officials of the Shanghai CPC and government, and vice-ministers of various central government ministries. China aims to set new records by attracting 70 million visitors to view exhibits by 200 countries, regions and international organizations. A successful Expo will provide China with an excellent opportunity to showcase the prosperity of Shanghai, which will host the event, and Jiangsu Province and Zhejiang Province, which have expanding economic links to Shanghai. The theme for the Expo will be "Better City, Better Life." There will be keen interest in the ways in which Shanghai is presented to the world as an attractive city.

End Notes

1. In addition to the Shanghai economic sphere, there are also spheres centering on Beijing, Changchun, Chengdu, Chongqing, Dalian, Guangzhou, Hangzhou, Harbin, Jinan, Nanjing, Qingdao, Shenyang, Shijiazhuang, Shantou, Taiyuan, Wuhan and Xian (Gao et al. [2008], Pp.9-10).
2. This estimate assumes that the Shanghai economic sphere will maintain an average annual growth rate of 11%, and that the growth rates for Tokyo and New York will average 2% in the period to 2018.
3. World Bank, *World Development Indicators 2009*, p.xxi
4. Bulletin figures indicate that the GRP of the Shanghai economic sphere reached \$943.1 billion in 2008, surpassing South Korea's GNP of \$930.3 billion.
5. At a motor show held in Shanghai in late April, wealthy individuals bought 19 of the latest Porsche model, the Panamera (approximately \$300,000), in the first 30 minutes of trading. Most of the buyers came from Zhejiang Province. (See Wu J. [2009], p.26)
6. China's per capita GNI is \$2,370. When converted using purchasing power parity rates, this is equivalent to \$5,420 (*World Development Indicators*, p.14)

7. If the purchasing power of rural areas is added to that of urban areas, the number of color televisions owned in the Shanghai economic sphere increased by 28 million units between 2000 and 2007. The corresponding increases for refrigerators, washing machines and mobile telephones were 12 million, 37 million and 62 million respectively.
8. Evidence for this includes the fact that the system was initially maintained in three direct-controlled municipalities, including Shanghai, during the decentralization of fiscal policy to the regions. Sources that describe the contemporary fiscal situation and the decentralization process include Miyake, S. [2006].
9. However, while the 15% concessional tax rate was available to all foreign-owned companies established in special economic zones, in economic and technology development zones established in coastal open cities it was limited to manufacturing enterprises and did not include foreign-owned companies involved in commerce. Import tariff exemptions were also limited in scope compared with those available in the special economic zones (JETRO website, etc.). Current incentive measures are not examined in this article.
10. Some prefectures that are administered by city governments have also been designated as coastal open economic zones.
11. The reduced tax rate of 15% is subject to approval by the central government (Ministry of Finance).
12. Among existing studies, the expansion of the open zones is described in similar terms in Kojima, S. [2004].
13. Alarm over a relative decline in the city's status has been cited as one of the factors that led to the implementation of this project. Other useful sources include the article on the Pudong development scheme in Amako, S. et al. ed., *Iwanami Gendai Chugoku Jiten* [Iwanami Encyclopedia of Modern China].
14. A stock exchange was also built in Shenzhen, but the Shanghai exchange is significantly more important in terms of trading volumes and other indicators.
15. For example, at the end of 2008, the Chinese headquarters of 17 foreign-owned banks had opened offices in Shanghai. This is the highest number of any city and represents approximately 60% of the total for all of China. (*Touzi Shanghai* website, January 15, 2009).
16. The five priorities are (1) the establishment of multi-functional and multi-tiered financial systems (including systems to facilitate opening to foreign participation), (2) the modernization of shipping systems and the expansion of cooperation among ports in the Yangtze delta, (3) development through complementation between manufacturing and service industries, (4) the reform of corporate and government administration, and (5) the development of cooperative relationships between Shanghai and the Yangtze Delta and other cities in China, including Hong Kong, in order to build on their respective strengths.
17. For the purposes of this article, Shanghai (a direct-controlled municipality) was treated as a separate entity. While Shanghai has the same administrative status as a province, it is more appropriate in terms of population and GRP to compare it with prefecture-level cities. This approach also facilitates the task of ascertaining the expansion of the economic sphere.
18. To avoid complexity and facilitate comparisons, secondary industries are referred to in this article as "manufacturing industries" and tertiary industries as "service industries."
19. The next highest were Sichuan Province, Henan Province and Jiangxi Province.

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