

**The region anchored
by Guangzhou,
Shenzhen, and Hong
Kong faces
competition from
Shanghai**

Can the Pearl River Delta Region Still Compete?

Edward Leman

For more than two decades, the Pearl River delta (PRD) has been a crucial driver of China's economic growth, a key destination for foreign investment, and a platform for the country's growing integration into the global economy. With the return of Hong Kong to PRC sovereignty in 1997 as a special administrative region (SAR), there was widespread hope that the PRD would assume an even more important role in China's economic development. So far this is not happening. Competition from other parts of China and emerging structural issues within the delta are threatening to gradually erode the PRD's legacy

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This article draws from the findings of an 18-month consulting project that Chreod Ltd. recently completed for the Guangdong provincial government that reviewed development trends in the Pearl River delta over the last decade and projected scenarios for the delta to 2020. The project assessed three counties and 25 administratively defined cities in Guangdong, as well as the Hong Kong and Macao special administrative regions. This article solely reflects the views of the author and does not contain any proprietary government information.

as an economic powerhouse. Maintaining and improving this region's competitiveness will require central, provincial, SAR, and municipal governments across the PRD to make some hard decisions about economic restructuring and to take concrete, incremental actions to create and maintain a truly integrated regional economy.

Region basics

The PRD's role in China's economy is pivotal. Home to less than 3 percent of China's population, it contributes almost 7 percent of its GDP. The PRD economy, measured in purchasing power parity (PPP) terms and excluding Hong Kong and Macao, is larger than the national economies of Malaysia, Portugal, and Greece, two-thirds the size of the Philippine economy, and just under half the GDP of Australia.

Including Hong Kong and Macao, the delta's economy (also in PPP terms) is the size of Thailand's, half that of Spain, and just over 45 percent of Canada's. Per capita GDP in the PRD (excluding the two SARs) is triple that of Vietnam and 1.5 times that of the Philippines.

The PRD's economic importance in China stems from early economic reforms, started experimentally in the Shenzhen and Zhuhai special economic zone (SEZs), that quickly spilled over to adjacent cities and towns. Foreign direct investment (FDI), initially from Hong Kong (which shifted 70 percent of its industrial capacity to the PRD in less than a decade) and then from Taiwan, fueled massive manufacturing growth and exports. Since the mid-1990s, large influxes of FDI have originated from Japan, the United States, and other countries. Most investment, particularly from Hong Kong and Taiwan, has been in low value-added manufacturing, creating jobs for huge pools of low-cost, largely female migrant labor from inland provinces.

As other parts of China became more competitive during the 1990s—particularly the Yangzi River delta anchored on Shanghai—the PRD's attractiveness to foreign investors began to wane. Though the PRD accounted for more than 40 percent of actual FDI in 1990, its share of the national total declined to just over 25 percent by the end of the decade; in comparison, the Yangzi delta's share grew from 10 percent in 1990 to 25 percent in 2000 and is continuing to rise.

Many foreign observers see the PRD as a large, uniform economic "dragon" that pumps out container after container of "Made in China" toys, apparel, accessories, and other products to global consumer markets. But enormous differences in the purchasing power and production capacities of discrete urban markets exist throughout the core PRD. These markets are developing in markedly different ways and at varying speeds. Companies seeking to enter the

China market through the PRD, to expand existing operations from other parts of the country, or to expand businesses already in parts of the PRD, need to understand these differences.

The PRD megalopolis

Unlike previous studies of the PRD, the Chreod Ltd. project reviewed 534 towns, townships, sub-districts, and neighborhoods using data from China's 2000 National Census. For the first time in China's recent statistical history, this census enumerated migrants regardless of where they held their household registration. Given that the PRD holds one of the largest concentrations of migrants in the country—almost 40 percent of the PRD's total population enumerated in the 2000 Census are migrants—the filling of this statistical gap was long overdue.

Analysis of town and street committee data from the 2000 National Census has clearly confirmed the existence of a concentrated megalopolis stretching from Hong Kong through Shenzhen, Dongguan, Guangzhou, Foshan, and Shunde to Jiangmen. The megalopolis does not yet extend to Zhongshan, Zhuhai, and Macao, but likely will by 2020.

It is important to recognize that a megalopolis is not a "mega-city" such as Bangkok, Manila,

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What makes a megalopolis unique and important is that it is usually the principal economic powerhouse of a country or region.

or Jakarta. A megalopolis is a linear band of cities and towns of varying sizes, structured along a rapidly urbanizing and industrializing corridor at least 150 km long. Two large metropolitan poles typically anchor either side of a megalopolis, linked by strong transportation and communications networks such as expressways and railways. Experience in other countries (including the United States, whose Eastern Seaboard megalopolis stretches from Boston through New York to Washington, and Japan, with the Tokyo-Osaka megalopolis) shows that productive and efficient megalopolises exist when flows of labor, goods, information, and capital are unimpeded between the metropolitan poles and between smaller settlements within the urban system.

What makes a megalopolis unique and important is that it is usually the principal economic powerhouse of a country or region—a concentration of consumers, purchasing power, and production that incubates new and higher forms of economic development and growth. As transportation and communications linkages improve among multiple centers, “urban-rural” boundaries disappear in a rapidly changing web of economic activity. People live and work in different cities; manufacturers are able to source competitive inputs from multiple suppliers over a broad area; cities and towns develop specializations; and higher-level services concentrate within areas that best support regional, national, and international market transactions.

Regional analysis of population densities, traffic flows, and travel times along existing and planned road and light rail networks led to the identification of seven large metropolitan and urban regions in the PRD megalopolis (see p.12):

- **The Guangzhou metropolitan region (MR)** encompassing Guangzhou (including Huadu and Panyu districts, recently annexed by the municipality), Foshan, Nanhai, Shunde, and surrounding towns;
- **The Zhongshan-Jiangmen urban region (UR)** made up of two cities and surrounding towns and villages;
- **The Zhuhai-Macao urban region;**
- **The Dongjiang urban region** encompassing the Dongguan urban area (city proper) and a dense network of towns east of Dongguan city;

- **The East-central delta urban region** stretching from Humen Town through Houjie Town and Chang’an Town in Dongguan Municipality, and crossing into Songgang Town and northern Bao’an District in Shenzhen Municipality;
- **The Shenzhen metropolitan region**, which includes the Shenzhen urban area, a cluster of towns to the north (including some in Dongguan Municipality), and a cluster of towns in the eastern portion of Shenzhen Municipality; and
- **The Hong Kong metropolitan region.**

Prospects for the PRD’s market regions

In a previous *CBR* article (see “Choosing Locations to Build Profits,” September-October 2002, p.6), Chreod suggested that foreign investors should differentiate urban regions in China according to eight distinct roles in the supply chain: domestic production centers of intermediate outputs; producers of finished outputs for domestic markets; producers of finished outputs for export markets; domestic distribution centers; offshore distribution centers; consumer markets for domestic products and services; consumer markets for imported products and services; and centers for supporting services in finance, management, innovation, logistics, and other services. Clearly, these roles are not mutually exclusive. Some cities, usually large metropolitan regions, perform a complex combination of roles in the supply chain. Others, including many large inland cities, are much more focused on one or two roles. The challenge for foreign investors is to identify in which role(s) an urban region is likely to maintain and improve its competitive advantage, and how this advantage can mesh with the company’s China business strategy.

This framework helps describe the principal roles of the five market regions that comprise the PRD megalopolis and their prospects for maintaining and improving competitiveness over the next 20 years.

● **The Guangzhou metropolitan region**

The Guangzhou MR’s population of 14.4 million makes it the largest market in the PRD and China’s second-largest metropolitan market after Shanghai. It is about 50 percent larger than Beijing and Tianjin, and more than three times larger than Chongqing. Guangzhou’s regional economy is a major production center for intermediate and finished inputs for the domestic chemical, textile, plastics, electrical machinery, transportation equipment, telecommunications equipment, leather, and food processing sectors. It is also a growing center for medium and high value-added manufacturing exports, particularly in the automotive and related sectors.

Both in numbers and output value, contributions of foreign (including Hong Kong,

Taiwan, and Macao) firms to the Guangzhou MR economy are among the lowest in the PRD megalopolis. But the average value of industrial outputs from foreign-invested enterprises (FIEs) in Guangzhou and Foshan cities (the two principal municipalities in the MR) are higher than in most other market regions in the PRD, except for Shenzhen. This suggests that FIEs that have chosen to locate in the Guangzhou MR are engaged in higher value-added industrial production that benefits from the region's more developed consumption markets, the presence of related industries, Guangzhou's superior pool of trained human resources, and its important distribution functions. The value of the output of domestic enterprises, however, is similar to the rest of the PRD megalopolis, with the exception of Shenzhen. This suggests that spillover benefits of foreign involvement in the region are not yet occurring, most likely because the state- and collectively owned enterprises are insular and focus on lower value-added, traditional industries (see Figure 1).

Aside from its production role, the Guangzhou MR is the PRD's major domestic distribution center with strong and improving rail and highway links to the rest of the country. The Guangzhou and Foshan governments are promoting the logistics sector to improve the reach and efficiency of the region's distribution role, particularly as a hub for imports and exports. This goal will be aided by the new Guangzhou airport in Baiyun, which should be completed by the end of this year and which will include an international air cargo function, and the proposed construction of a major container terminal in Nansha at the mouth of the Pearl River. Though Hong Kong terminal operators oppose the Nansha project, construction is expected to start this year.

The Guangzhou MR is also a key domestic market for both domestic and imported goods. Purchasing power in the region is growing rapidly, and a significant middle class with high levels of savings has emerged both within dense urban areas and in suburban areas, including supposedly rural towns. Demand for better housing and higher-quality consumer goods is strong and growing.

Not surprisingly, the MR is rapidly assuming regional importance in financial, management, technical, logistics, and information services. Though Shenzhen and Hong Kong both aspire to become the "services capital" of the PRD, Guangzhou is assuming growing importance in the provision of services to much of the region. Services are likely to become more important in the Guangzhou economy during this decade—and foreign service providers should also begin to play a larger role.

In short, economic prospects in all supply chain roles for the Guangzhou MR are generally positive. But the region faces three principal chal-

Though Shenzhen and Hong Kong both aspire to become the "services capital" of the PRD, Guangzhou is assuming growing importance in the provision of services to much of the region.

lenges that will affect its competitiveness over the next decade. The first is a growing public concern over the environment, particularly surface water and air quality. The entire delta is heavily polluted, but water pollution levels appear to be particularly high in the Guangzhou MR. Both the provincial and municipal governments started a major multi-year campaign late last year to treat 70 percent of domestic wastewater discharges by the end of 2005. Though this effort will help, a more intractable problem is surface run-off from urban areas and, more important, run-off from intensely fertilized suburban agricultural land and poultry and pig farms. Concerns over air quality are also rising. Coal-fired power plant emissions have received much attention in recent years and rapid increases in private vehicle ownership are raising the specter of ground-level pollution.

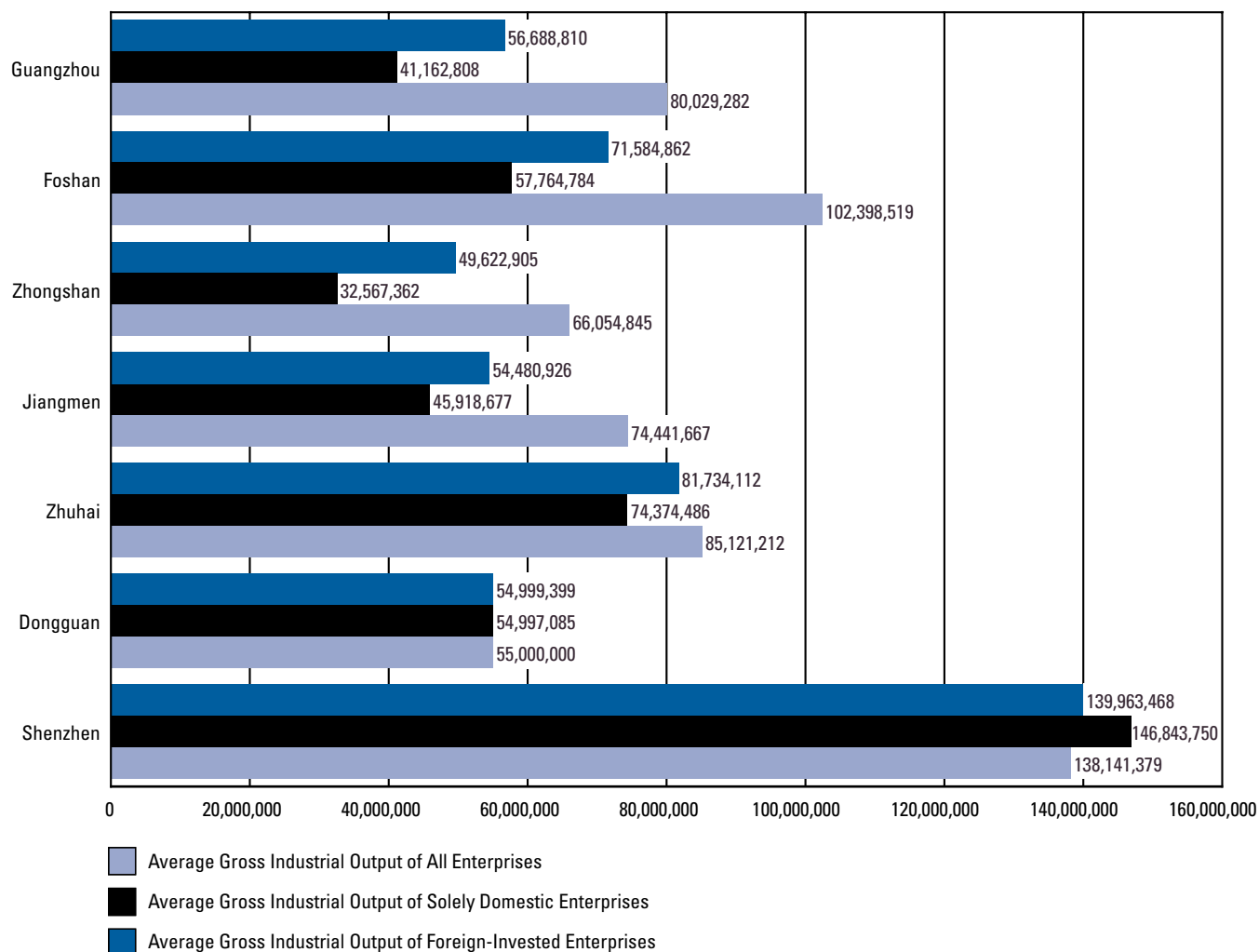
The second major challenge is to control suburban sprawl. Many towns compete intensely for industrial and real estate development with little concern for the environmental impact and the consumption of agricultural land. Collective land ownership in the suburbs means that controls over development by municipal governments are ineffective. Local governments need to set up institutional mechanisms to manage growth.

The third and perhaps most important challenge is for the municipal governments of Guangzhou and Foshan, which now operate in virtual isolation, to coordinate the planning, development, and operation of regional transport and infrastructure. Current duplications of infrastructure and services are failing to take advantage of economies of scale and are creating huge inefficiencies.

● The Dongjiang urban region

The Dongjiang UR is very different from the Guangzhou MR. Much smaller, with a population of just under 4 million, it loosely surrounds Dongguan City, which has a total population of around 850,000. Over the last 15 years, the small, medium, and large towns throughout the Dongjiang UR have been competing intensely

Figure 1
Average Industrial Output in the Pearl River Delta by Type of Enterprise, 2000 (RMB)



SOURCE: Chreod Ltd.

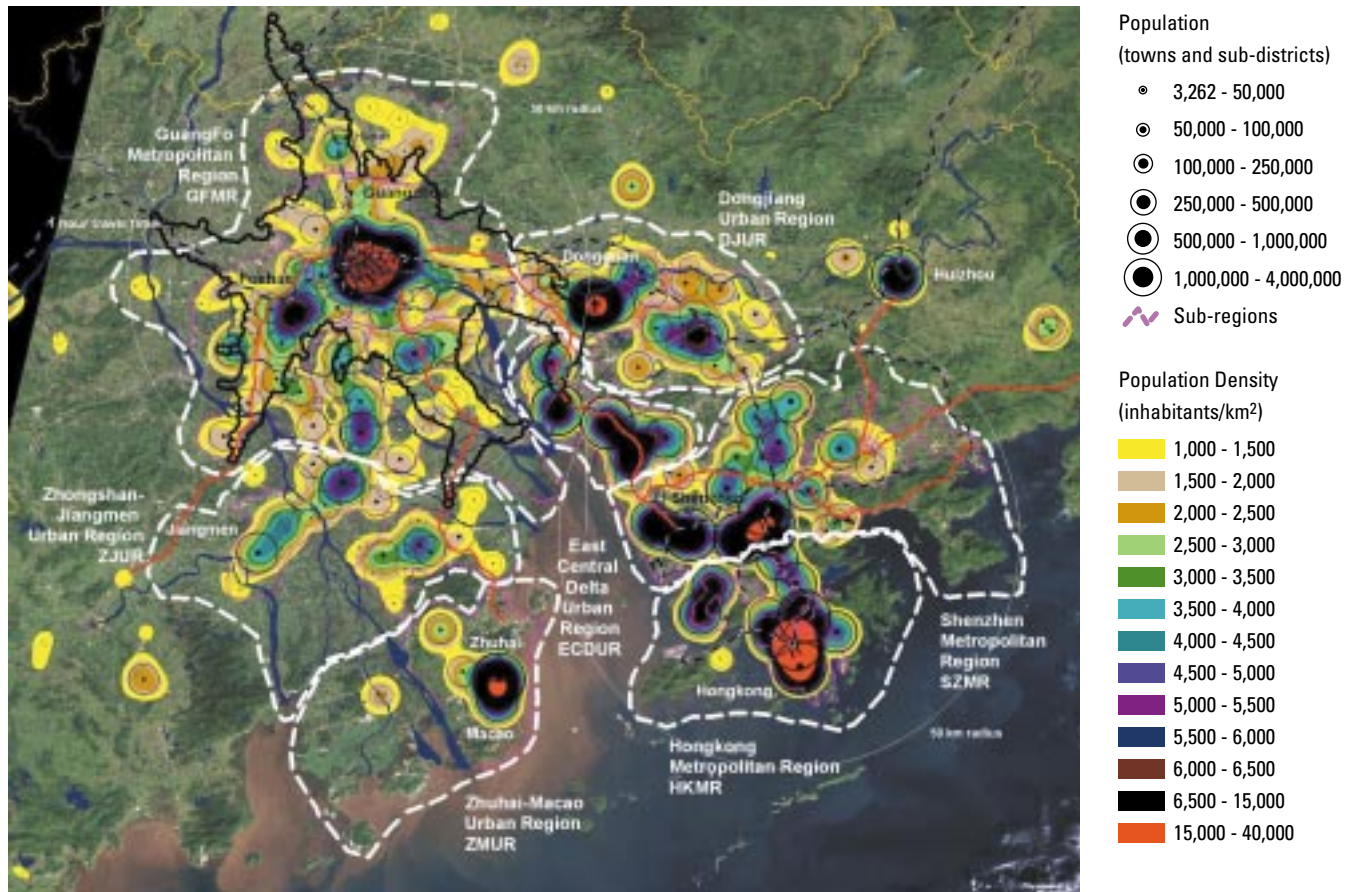
among themselves, first to attract the low value-added manufacturing that was relocating out of Hong Kong, and then to attract similar investment from Taiwan. Land development and environmental controls in these towns are lax. Unlike in the more-regulated cities of the region, much of the town land is collectively owned. Though collectives are forbidden to sell or lease use rights to collectively owned land, many have circumvented this ban through “informal” arrangements and by building collectively owned factories and workshops that are then leased out to small and medium-sized manufacturers. The result has been an 86 percent increase in urban land area in the Dongjiang UR from 1990 to 2000 (compared to 46 percent growth in the Guangzhou MR).

The vast majority of manufacturing in the region has been low value added and for export. The region has become one of the strongest

magnets in the country for un- and semi-skilled migrant labor from the periphery of Guangdong and from poorer, inland provinces. The 2000 Census data indicate that 77 percent of the Dongjiang UR’s population is made up of migrants (compared to 35 percent in the Guangzhou MR). Most of these migrants are young women. Though early foreign investment was in low value-added manufacturing facilities, in recent years several medium and higher value-added firms have located in Dongguan City itself or in its immediate suburbs; these include Nokia AB, Samsung, Nestle SA, and Minolta Co. Ltd. However, the average output values of both domestic and foreign-invested firms in the Dongjiang UR are still below average for the PRD megalopolis as a whole.

Dongjiang is essentially a production center. It does not play a major role in southern China in either domestic or offshore distribution, and

Figure 2
The Pearl River Delta Megalopolis, Population Densities, 2000



SOURCE: Chreod Ltd.

the large proportion of migrants with limited purchasing power makes for a comparatively small consumer market. Both the provincial and municipal governments recognize that a major restructuring of the Dongjiang economy is required if it is to attract higher value-added manufacturing and supporting services.

The governments face two major challenges, both of which will require incremental and sustained actions. The first is the comparative weakness in human capital. Original residents have among the lowest levels of educational attainment in the PRD, and there are few institutions of higher learning in the region. Migrant workers are semi-skilled; those with higher skills gained from work-related training can easily shift to other parts of the PRD if better employment opportunities arise. Migrant workers are still regarded as outsiders and have no way of transferring their household registrations to Dongguan. Therefore, the skills and energy of migrant workers are not long-term assets that can be tapped to foster entrepreneurial development, as is the case elsewhere in China.

The second major challenge is more intractable. Though the institutional capacities of the Dongguan municipal government are improving, nearby town governments remain weak in planning, management, and control. These towns need to be brought under the purview of the municipal government.

● **The East-central delta urban region**

The East-central delta UR encompasses a cluster of towns and villages in a 40 km by 15 km corridor holding 4 million residents. Sandwiched between the Dongjiang UR and the Shenzhen MR, there is no administratively defined city in the East-central delta; the northern half falls under the Dongguan Prefecture and the southern half in Shenzhen.

This region is similar to the Dongjiang area in terms of economic and institutional characteristics but has experienced even greater sprawl and more piecemeal growth. This situation has, in turn, led to far higher population densities and massive conversion of agricultural land over the last decade: urban built-up land skyrocketed 146 percent from 1990 to 2000, resulting in a

loss of 25 percent of the region's agricultural land area.

Chang'an Town, located in the middle of the corridor, is typical. It has a registered population of just over 35,000 residents and is therefore officially designated a small statutory town; under senior government regulations on public staff allotments for towns of this size, it is therefore allowed, for example, to hire two traffic police. In reality, the 2000 National Census registered a total population of 565,000, including migrant workers. This "town" has a population the size of Haikou, capital of Hainan Province, but it provides public services to less than 10 percent of its residents.

● The Shenzhen metropolitan region

Shenzhen was established as an SEZ in 1980. At that time a village of less than 25,000 inhabitants, Shenzhen became the platform on which the central government experimented with a wide range of financial, economic, and institutional reforms. Located directly across the border from Hong Kong, the SEZ has sought to catch up and compete directly with the SAR. In reality, there are two Shenzhens. The SEZ itself is a 5 km-wide strip of land stretching 40 km along the Hong Kong border. Residency and employment rights in this core area are rigidly controlled—a barbed-wire fence separates the SEZ from the rest of the much-larger municipality. Entry from the mainland to the SEZ is strictly controlled. The SEZ is therefore ringed on the south with the still heavily guarded border with Hong Kong and on the north with a similar security perimeter.

Beyond the northern SEZ border, Shenzhen Municipality—the second Shenzhen—extends another 20 km to the boundaries of Dongguan and Huizhou cities. This suburban Shenzhen is made up of a dense corridor of towns along the eastern shore of Lingding Bay that joins up with the East-central delta UR, a cluster of towns farther inland to the north of the SEZ, and a cluster of towns in the east near Huizhou. This Shenzhen exhibits many of the same town-based characteristics of the Dongjiang UR.

The SEZ was not conceived as a literal extension of Hong Kong but, rather, as a parallel metropolis that would, over time, benefit from proximity to Hong Kong's technological, intellectual, and financial capital. This strategy has worked very well. In the 1980s, Shenzhen was the first destination for manufacturers as they relocated from higher-priced Hong Kong. As land and labor costs rose in the SEZ, these lower value-added manufacturers headed north to the second Shenzhen and Dongguan, to be replaced by central-government-controlled and foreign higher value-added manufacturers, including some of China's top high-technology companies. Not surprisingly, the municipal government has concentrated public investment within

the boundaries of the SEZ to build a completely new city. Over a 20-year period, the SEZ has changed from a rather rough and wild boomtown into a sophisticated, well-managed metropolis attracting global investment in high-end manufacturing and advanced services, including innovative research and development.

From the supply chain perspective, the SEZ has become an important producer of high-end outputs for the domestic and export markets in information technology equipment and software, telecommunications equipment, new materials, biotechnology and pharmaceuticals, electronics, and some traditional industries,

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including food processing, plastics, and nonferrous metal products. Interestingly, though the participation of foreign firms in Shenzhen is the same as in Dongguan, the average output values of both domestic and foreign industrial companies are more than twice as high in Shenzhen. Indeed, the average output value of domestically invested firms is slightly higher than that of FIEs, indicating that Shenzhen is home to some of the most productive and advanced domestically owned companies in China.

The SEZ has also become a key offshore distribution center through bulk cargo and limited container ports in Shekou on Lingding Bay, and through a major container port in Yantian on Dapeng Bay in the east, owned jointly with Hong Kong's Hutchison Port Holdings. The SEZ is striving to build logistics capacities to global standards.

The SEZ is also an important and growing market for both domestically produced goods of all kinds (similar to Guangzhou) and imports. Rapid growth, a highly educated populace, and strong household purchasing power have created a large middle class in the SEZ that is approaching income levels across the border in Hong Kong. The SEZ is also becoming a center for support services in finance, management, trade, innovation, and education. It is not yet at the level of Hong Kong, but is catching up, particularly in services related to technological innovation.

Though the SEZ's prospects are good, major challenges face the second Shenzhen where the suburban and peri-urban areas share the same problems as the Dongjiang and East-central delta regions. In recognition of these challenges, the Shenzhen Municipal Government has recently embarked on an ambitious program of suburban upgrading that will last most of this decade, including the consolidation of several scattered towns into Hong Kong-style "new towns." In the medium term, this will likely improve the attractiveness of the second Shenzhen to high value-added manufacturing and services firms.

● The Hong Kong metropolitan region

Hong Kong's geography and political history make it a unique city. An enclave for virtually all of its history, its development was always based on ensuring a high degree of economic self-sufficiency. When geographic limits to urban development were reached on Hong Kong Island and Kowloon, the government started in the 1970s to build, and integrate through transportation links, large new towns in the New Territories.

With the establishment of Shenzhen and the gradual opening up of China, Hong Kong's firms quickly moved industry across the border. This freed up valuable land for commercial redevelopment into offices for the growing service sector, retail complexes to serve growing consumer demand, and housing. The metropoli-

The SARS Outbreak and the Pearl River Delta

The Pearl River delta (PRD) megalopolis has been in the press in recent weeks as the likely epicenter of a new, and in some cases deadly, illness that has spread around the world from its apparent source in Foshan, Guangdong. The new illness, Severe Acute Respiratory Syndrome (SARS), may have originated in Guangdong in part because of a combination of economic and political circumstances in the PRD.

Though the source of the illness is unknown as *The CBR* goes to press, initial investigations focused on the possibility that the illness jumped from livestock to humans (as occurred in the avian flu outbreaks in Hong Kong several years ago). Farming practices in suburban areas in the PRD—particularly the generation of large quantities of agricultural run-off—and the lack of town and township government oversight of these practices, may have contributed to the public health problem.

Chreed Ltd.'s research has shown that agricultural run-off is, in some areas, a bigger contributor to pollution than urban domestic

wastewater. (This is a problem shared by other metropolitan areas, including Shanghai.) The problem is huge: treating agricultural wastewater is outrageously expensive. Yet the diets of the PRD's growing middle class have moved away from grains to fish and livestock (pigs and chicken in particular), and town and township governments lack the human resources and institutional capacities within their environmental protection bureaus to monitor and control agricultural development. In the PRD, agricultural output is concentrated on the western side of the delta, including metropolitan Guangzhou (which includes Foshan). The east side is much more industrialized and does not have the rich deltaic soil and water resources to sustain intensive agriculture. In sum, these public health issues may in part be institutional.

The other important dimension of the SARS issue—crisis management—has run headlong into the PRD's political circumstances. The World Health Organization was highly critical of the China's failure to respond to global calls for information at the start of

the SARS outbreak and of its tardiness since. This behavior may have been due, in part, to the change in governments at city, provincial, and central government levels over the past six months and the fact that health officials probably had not yet worked out how to deliver bad news through the new hierarchy. The recent weaknesses in crisis management may, therefore, be temporary, and there is reason to believe that provincial and municipal governments may bend over backward to step up public health monitoring and regulatory enforcement.

What may be more worrisome from a public-health standpoint is the capacity of local governments to respond to other environmental disasters—particularly related to water pollution—such as large-scale chemical and fertilizer spills. These could directly affect the water supply of thousands and have much wider, more immediate, and more devastating effects than SARS.

—Edward Leman

tan economy—including its stock market and banking sector—rapidly became dependent on trade in scarce real estate.

During the early and mid-1990s, Hong Kong's service economy boomed as the city became foreign investors' principal gateway into China. Demand for commercial space and high-end housing propelled the real estate market into a speculative bubble that burst after the Asian financial crisis forced many foreign firms to either downsize, quickly exit the Asian market, or relocate to the mainland. The subsequent collapse of the nascent high-tech sector exacerbated problems in Hong Kong's real estate-driven economy.








Hong Kong has developed specialized supply chain roles. Neither a major production center

nor a major domestic distribution center, it is the largest offshore distribution center in China and the largest container port in the world. But its container terminals already face competition from lower-cost facilities in Shenzhen and will soon have to compete with Nansha in Guangzhou and deepwater ports in the Yangzi delta. Geographic constraints to further port development in Hong Kong make it likely that the SAR's offshore distribution role will gradually stabilize and then decline over the next 10-20 years relative to China's other coastal ports.

Without a significant manufacturing capacity, Hong Kong has become one of the world's most productive and innovative providers of support services in finance, law, business man-

Figure 3
Market Regions in the Pearl River Delta: Functions and Prospects

Region's importance in Southern China:

	High		Growing
	Medium		No major Change
	Low		Declining
			Uncertain

	PRODUCTION CENTER			DISTRIBUTION CENTER		DOMESTIC MARKET		CENTER FOR SUPPORTING SERVICES
	Production of Intermediate Inputs	Production of Finished Outputs for Domestic Markets	Production of Finished Outputs for Export Markets	Domestic Distribution Center	Offshore Distribution Center	Market for Domestic Products and Services	Market for Offshore Products and Services	
Guangzhou Metropolitan Region	↑	↑	↑	↑	↑	↑	↑	↑
Jiangmen-Zhongshan Urban Region	→	↑	↑	→	→	↑	↑	→
Zhuhai-Macao Urban Region	↓	→	→	↓	↓	→	→	→
Dongjiang Urban Region	→	→	?	→	→	→	→	→
East Central Delta Urban Region	→	→	?	→	→	→	→	→
Shenzhen Metropolitan Region	→	↑	↑	↑	↑	↑	↑	↑
Hong Kong Metropolitan Region	↓	↓	↓	↓	?	→	→	↑

SOURCE: Chreod Ltd.

Governments and businesses must address four major structural issues if the megalopolis is to sustain and improve its global competitiveness as a provider of goods and services, and as a major distribution center for China.

agement, and trade. Despite major advances in Shenzhen and Guangzhou, no other city in southern China can approach Hong Kong's comparative advantages in advanced business services (in the same way that Boston, Philadelphia, and Washington cannot compete with New York in global financial services).

Hong Kong's comparative advantage as a center for support services will continue as long as it strengthens its human capital through improvements to secondary and tertiary education. Advanced business services are not enough to sustain a MR of more than 6 million people, however. Hong Kong's competitiveness rests on improving productivity—doing more with fewer employees. New production, distribution, and less-advanced tertiary services will be necessary to provide jobs for the territory's people. This will require a bigger metropolitan market, one approaching the size of metropolitan Shanghai or Guangzhou.

The single biggest constraint to Hong Kong's development is the barrier to the free flow of people, goods, information, and capital at the border with Shenzhen. Hong Kong and Shenzhen need to become closely integrated into a true metropolitan economy without artificial barriers that undermine efficiencies. Clearly, New York's metropolitan economy would not have developed the way it did if businesspeople and residents had had to spend an hour or more at checkpoints to enter Connecticut or New Jersey. Integration of the Hong Kong and Shenzhen metropolitan economies would create a regional market of more than 14 million consumers and workers, the same as metropolitan Guangzhou. Closer integration would reduce Hong Kong's reliance on the volatile real estate market and would provide Shenzhen's advanced industries with much more efficient access to

superior business services in Hong Kong, allowing for the emergence of globally competitive industry clusters. Closer integration would also eliminate duplicative infrastructure, such as the offshore distribution functions in the ports of Shekou, Yantian, and Hong Kong.

Senior SAR officials and business leaders have clearly recognized over the last two years that the "one country, two systems" model does not preclude closer economic integration with the Pearl River delta megalopolis. Border crossing hours have recently been extended, and construction is expected shortly on a new highway link across Shenzhen Bay. Cross-border integration issues are now being reviewed and managed at the central-government level by the State Development and Reform Commission and the SAR government. Though these are important steps, they must be followed by much bolder measures that integrate markets on a wider metropolitan scale.

Closer integration of the Hong Kong and Shenzhen economies will not only help develop the MRs but also improve the functioning of the PRD megalopolis as a whole. As mentioned earlier, efficient megalopolises exist when there are at least two large metropolitan poles having strong economic flows between them. This is currently not the case in the PRD megalopolis: though the Guangzhou MR is gradually developing into an integrated metropolitan economy, integration is not occurring quickly enough in Hong Kong and Shenzhen. In the long term, weak integration will undermine the PRD's competitiveness compared with China's other megalopolis. In the Yangzi River delta to the north, economic flows among Shanghai; Hangzhou, Zhejiang; and Suzhou, Wuxi, and Nanjing in Jiangsu are far less constrained.

Improving the PRD's global competitiveness

Figure 3 summarizes Chreod's assessment of the roles and prospects of the PRD's seven market regions over the next 20 years. It shows that the megalopolis is not a uniform economic powerhouse but rather a system of discrete regions with distinct comparative advantages—and disadvantages. Governments and businesses must address four major structural issues if the megalopolis is to sustain and improve its global competitiveness as a provider of goods and services, and as a major distribution center for China.

The first challenge is to accelerate the integration of Guangzhou and Foshan into a truly metropolitan regional economy. Integration will require much closer collaboration in removing intercity barriers to the free flow of labor, goods, and services. It will also require creative collaboration in improving the domestic and global

branding of the metropolitan economy as the “Guangzhou metropolitan region” of more than 14 million residents.

The second challenge is to strengthen the economic capacities of the southern pole of the PRD megalopolis by integrating Shenzhen and Hong Kong. Both municipal governments must exhibit far greater commitment to developing innovative, world-class institutional mechanisms to achieve economic integration while respecting the political, social, and cultural differences of the two jurisdictions. The third challenge is to re-engineer the disaggregated sprawl and economies of the corridor of industrialized towns and villages stretching between Shenzhen and Guangzhou. This economic re-engineering will require deep and wide institutional change to local governance, urban management processes, land use rights, fiscal entitlements, and intergovernmental relationships in this sprawling corridor. Given the structure of governance in China, these far-reaching changes will require strong and sustained leadership at the provincial level.

The fourth challenge is to improve transport linkages. The main existing link—the Hong Kong-Guangzhou expressway, built in the early 1990s under a concession arrangement with a Hong Kong developer—is substandard and cannot handle the volume of flows that a truly integrated megalopolitan economy will generate. The delta’s governments and entrepreneurs should concentrate on improving the efficiencies of transport linkages in the eastern delta, home to the most productive entities in the megalopolis. These linkages need to be much better coordinated with the more rational development of the delta’s bulk and container ports. The uncoordinated development of ports in the delta to date is leading to inefficiencies that could eventually undermine the competitiveness of the megalopolis as a major offshore distribution center for China.

No country has ever planned a megalopolis. They are far too complex, dynamic, and rapidly changing for planning to have much value. What governments can and should do is minimize impediments to flows within the megalopolis so that market forces can fully benefit from the diverse comparative advantages of cities and towns within this dynamic economic region. The PRD’s global competitiveness during the next 20 years will depend on how well governments at all levels—and domestic and foreign companies—manage important structural changes, particularly in relation to how similar challenges are met in the Yangzi delta megalopolis, China’s other economic powerhouse and the PRD’s principal competitor. 完