

Urban Infrastructure Investment and Financing in Shanghai

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Brief Review of Infrastructure Development in Shanghai

Shanghai has a long history of seven centuries as a vibrant city with a distinctive culture of inclusion and diversity. But today's Shanghai is a youthful urban center that is developing rapidly, as true urban modernization began only in the late 1980s.

Prior to the launch of this modernization drive, Shanghai's development had been hampered by insufficient investment in infrastructure, significant legacy issues and a poor investment climate. In 1990, on a per capita basis, road area was mere 2.28 m², public green area was only 1.02 m², and living space was only 6.6 m². In late 1980s there were almost 200,000 families struggling with per capita living space lower than 4m². Traffic congestion, housing shortages, and environmental pollution had become the three major obstacles constraining economic growth in Shanghai:

- GDP growth hovered at around 4% throughout 1980s and early 1990s;
- In 1990, the Shanghai government's fiscal receipts were only RMB 28.4 billion;
- And foreign direct investment was US\$ 214 million.

Beginning in 1992, Shanghai seized the unprecedented opportunity of the development of the new Pudong District on the east side of the Huangpu river. Accelerated financing reforms and increased investment in urban infrastructure ushered in a new historical period of infrastructure development. As a result, over

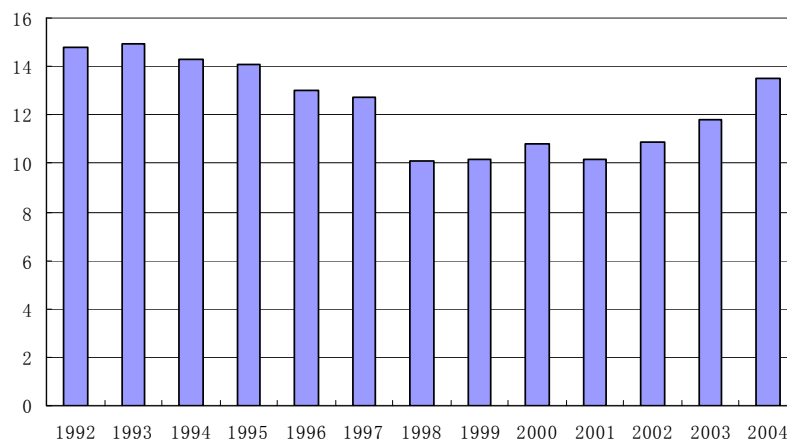
40 key projects have been completed, including 4 Bridges and 3 tunnels crossing the Huangpu river, connecting the east and west part of Shanghai; expressways and urban elevated road network; three rail transit lines totaling 125 km in length; Hongqiao Airport extension and Pudong International Airport construction; an integrated sewerage system; water supply facilities upgrading and water resource protection; and large-scale public green area developments etc. By the end of 2004, the per capita road area, public green area and net living space in Shanghai have undertaken a dramatic rise compared with 1990s (see Table 1).

Table 1: Comparison of Urban Infrastructure Development Between 1990 and 2004

Item	1990	2004
Road Area (m ² per capita)	2.28	12.3 (2003)
Rail Transit (km)	0	125
Living Area (m ² per capita)	6.6	14.2
Green Area (m ² per capita)	1.02	10
Waste Water Treatment Rate (%)	0	65.3

Shanghai has taken on an entirely new look. Sustained double-digit economic growth for 13 consecutive years since 1992 (see Chart 2) speaks to the fact that effective investment in infrastructure has not only directly improved the living standard and investment climate in Shanghai but has also stimulated China's national economic growth.

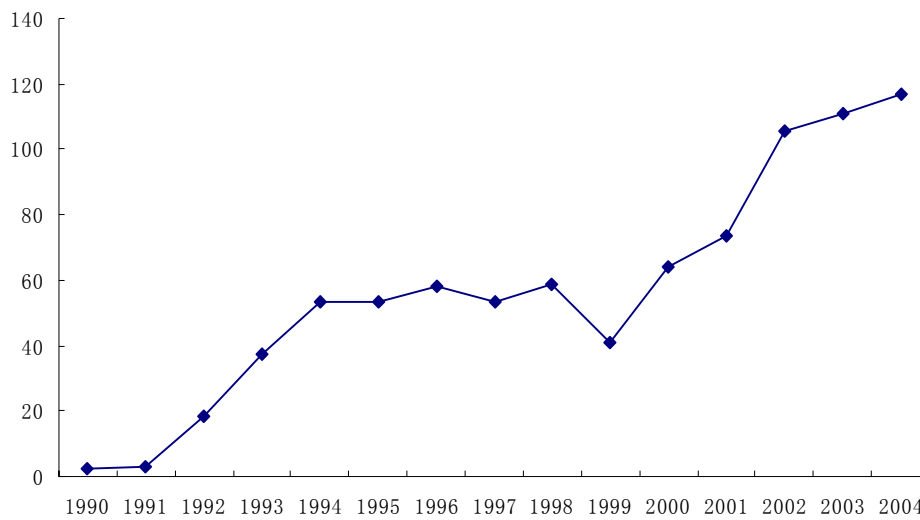
Chart 2: GDP Growth Rate of Shanghai (%)



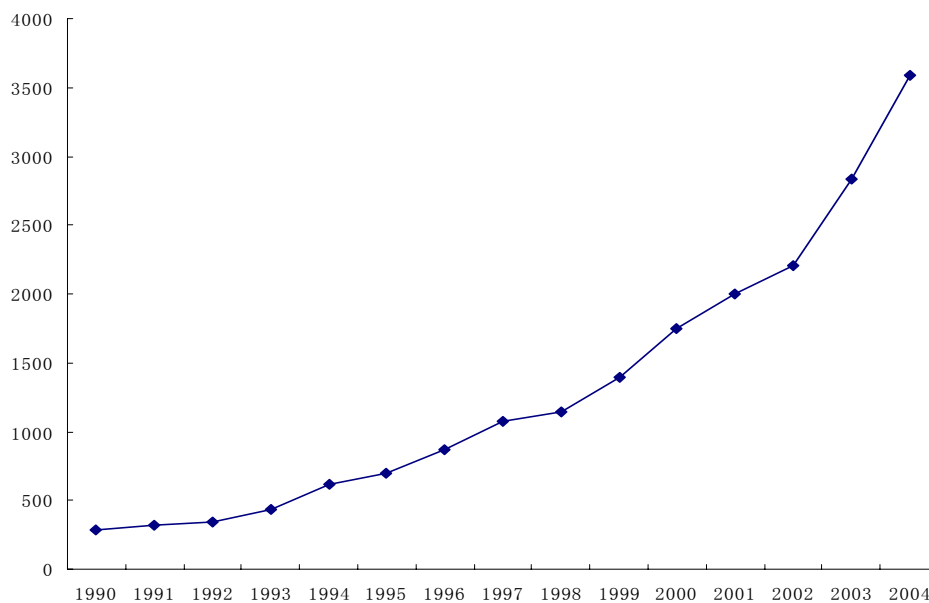
By 2004, foreign direct investment in Shanghai has risen to US\$11.7 billion, and the FDI sum-up from 1992 to 2004 has reached US\$ 85.0 billion; Shanghai government's fiscal receipts have risen to RMB 359.17 billion by 2004, among which the municipal fiscal revenue is RMB 111.9 billion. (see Chart 3).

Chart 3: Foreign Direct Investment and Fiscal Revenue in Shanghai *

Foreign Direct Investment in Shanghai (Unit: US\$ 100 Million)



Fiscal Revenue in Shanghai (Unit: RMB 100 Million)



* Source: Shanghai Statistic Yearbook 2004

New Approaches in Urban Infrastructure Financing

We have been exploring for new approaches in investment and financing for urban infrastructure construction in line with the specific needs of Shanghai and the characteristics of China in this new era.

Specifically, the approaches we have adopted are as follows:

1. Diversification of financing sources.

Under the planned economy, government fiscal input had been the only source of financing for urban infrastructure development. The first part of Shanghai's strategy for the diversification of infrastructure financing was the establishment of governmental investment corporations, such as Shanghai Chengtou Corporation (Urban Development Investment Corporation), with a mandate to initiate new financing approaches, including bond issuance, concession management, and capital market financing etc. As the biggest governmental investment corporation in Shanghai, by the end of 2004, Shanghai Chengtou Corporation has mobilized a total of more than RMB 140 Billion for direct investment in urban infrastructure. The second was to leverage limited governmental investments to attract loans from both international and domestic lenders. On the international front, we have made good use of loans from the World Bank, ADB, the German Government, and the Dutch Government for the construction, respectively, of the Shanghai Sewerage Project Phase 1, the Yangpu Bridge, Metro Line #1 and #2, and the Hongqiao International Airport etc. On the domestic front, we have successfully signed cooperation agreements with large domestic financial institutions and started mobilizing financing from capital market including issuing urban infrastructure construction bonds.

Through above practices, we have eliminated the bottleneck effect under which the pace of development was constrained by the availability of government fiscal inputs, and secured sufficient credit facilities for urban infrastructure development in the coming decade.

Though the unprecedented scale of investment in urban infrastructure in the 1990s might seem to involve “prespending” future earnings, experience has demonstrated that in certain phases of development it is more economical to invest early so as to take advantage of relatively low costs, and practice has proven that such investments can pay off handsomely.

2. Ending the free use of land resources and cheap use of infrastructure facilities.

Since the 1990s, Shanghai has taken the lead in land leasing in China and has generated revenues of over 100 billion RMB in the past 13 years, all of which has been injected in urban infrastructure construction and in the substantial improvement of the city’s housing condition. In this way, the government has not only obtained a large amount of capital needed for upgrading urban infrastructure, but it has also helped rationalizing the spatial layout of the central city through differential land pricing. It has thus been proven that resources can be translated into capital in a market economy in which urban infrastructure is no longer a “charity” and payment is required for the use of scarce land resources.

3. Developing multiple market-based investment models.

In the process of ongoing investment and financing reforms as regards urban infrastructure construction, priority has been placed on the diversification of investment models.

For revenue-generating projects, such as expressways, urban water supply works, wastewater treatment facilities etc., investments have been encouraged and attracted from international partners, domestic enterprises, and private investors, through concession contracts, initial public offerings, joint ventures etc. For example, the Pudong Water Works, as a joint venture between Shanghai Chengtong and a French investor, VEOLIA, has successfully introduced investment of RMB 2.03 Billion; the Zhuyuan Wastewater Treatment Plant (Phase 1) is a BOT project won by a domestic investor, Youlian company, from which we successfully introduced investment of RMB 670 million; as another example, the construction of

expressway in Shanghai has been opened to all kinds of investors, including private and foreign investors, who have contributed RMB 44.8 billion, resulting in the substantial completion of an expressway network in Shanghai with total length of 460 km.

For non-profit projects, such as bridges and tunnels, the return rate of the investment are ensured by the government while the cooperation partners have been selected from a market-based competition with an open tender.

The development of diversified market-based financing models has been accelerated by our strategy of opening up the infrastructure sector and creating a competitive market environment for infrastructure investment and financing in which the role of the governmental investment corporations is to guide capital flows. This strategy is also conducive to attracting more investment in Shanghai's urban infrastructure from domestic enterprises, private businesses and international investors. This is, therefore, the direction of our ongoing investment and financing reforms.

Our Experiences

Looking back on our past experiences, we believe that our modest success in infrastructure development over the past 13 years has been a result of four factors. First, it's very important to have a stable and sustainable master plan for urban infrastructure development, which should be in line with the city development strategy.

Second, a major shift in mindset, which is putting urban infrastructure development at the center of our city development strategy to improve the city's investment climate and revitalize its economy, which is particularly important in the initiate development stage of the city

Third, rationalizing debt financing for urban infrastructure construction with an effective control of associated risks. For a developing country, it is extremely important to control the scale of borrowing, as fiscal revenue may otherwise be

insufficient for debt servicing.

Fourth, any monopoly in infrastructure investment and finance should be eliminated. The market should be opened and competition fostered, such that the private sector can participate in financing infrastructure development on a level playing field, while the role of the government would be focused on implementation supervision and monitoring supported by policy framework reinforcement, tariff collection improvement etc.

In addition, we believe a certain amount of governmental input is still necessary in guiding urban infrastructure development.

Conclusion

As a growing city, Shanghai will undoubtedly face many new issues and challenges in the process of further urbanization, such as environmental protection, development balancing between the core city and suburban districts, and residential improvement to accommodate new migrants etc. Given the objective of building Shanghai into an international economic, trade, financial and shipping center and in view of the forthcoming World Expo 2010, there is much work that will need to be accomplished. As we go forward, it is important that we draw upon valuable experience and best practice in infrastructure financing from around the world, in particular from developing countries. We look forward to building an international metropolitan city, and to making our contribution to a better city and a better life for all.