

## **CONFERENCE PROCEEDINGS**

## Keynote Speeches

### **Sustainable Urban Development in China under Rapid Urbanization: With Special Reference to Transitions of Shenzhen**

**Xiaopei YAN**

*Centre for Urban & Regional Studies, Sun Yat-sen University, China*

*And*

*Municipal Government of Shenzhen, China*

#### **Abstract**

Rapid urbanization has been keeping in line with economic growth in China since the initiation of economic reforms and open-door policy. New cities and towns are mushrooming, and the existent ones expanding and strengthening. Metropolitan areas and urban agglomerations have come into being and grown rapidly. As a result, the urbanization level of China has increased significantly. Both economic growth and urbanization in China occurred within a worldwide background of economic globalization. Yet from the perspective of urban dynamics, local governments have played a pivotal role in the urbanization process since 1979, especially since the 1990s. As such, the general effects of economic globalization on urban space and social structure have been imprinted with China characteristics. Consequently investigations into the urbanization process in China and corresponding policies and strategies from both global and local perspectives are of not only theoretical imperatives but also practical significance.

The consequences of rapid economic growth and urbanization in China are twofold. On one hand, both the overall strength of the nation and the standard of living of individual citizens have been upgraded. On the other hand, problems pertaining to sustainable development arose. Deficiency of public services in rural areas, which can be attributed to exogenous urbanization, stands as an outstanding factor triggering conflicts between urban and rural sectors. The rapid yet extensive development in cities and towns render the ecology, economy, society and public security in urban areas very fragile. In the highly developed and urbanized coastal regions the question of sustainability is particularly pertinent.

The paper argues that urban transition is inevitable. There are three dimensions in urban transition: (1) to modify the economic growth model so as to keep rapid yet healthy economic development; (2) to construct and strengthen public services institutions, with the view to promoting harmonious social development; and (3) to improve environment and to emphasize equity, hence to support harmonious development of human-beings and nature.

Shenzhen, a young but pioneering city in transitional urban China, is taken as a case study. Set up as the first Special Economic Zone of China in 1979, Shenzhen has grown from just a border town into a mega-city with a population of over ten millions in just 27 years. This is undoubtedly reckoned as a miracle in the history of city development. At the same time, however, Shenzhen is also among the first cities in

the country confronting difficult problems related to fragility and sustainability. As such Shenzhen leads the country in entering the transitional stage.

Urban transitions in Shenzhen are based on continuing globalization, shift of national development strategy, and co-operation between Hong Kong and Shenzhen. The objective is to construct a framework of public policy, which encompasses guidelines for developing target industries, institutional construction of public services, and spatial planning that stresses nodal space. Institutional construction of public services takes on the most outstanding significance, since virtually it is to propose a program of sustainable development of the city. More importantly, the program must agree with both the requirements of economic development and demands of urban employment, education, housing, healthcare, and welfare. Urban transitions in Shenzhen are meant not only to address its own difficulties, but also to provide valuable lessons for other cities in China.

## 中國快速城市化下的城市可持續發展——兼談深圳城市轉型

閻小培

中山大學城市與區域研究中心、深圳市人民政府

### 摘要

1970 年代末中國改革開放以來，伴隨經濟高速增長，城市化進程加快，城市化水平提高，城市數量增加，城市規模擴大，都市區和都市連綿區形成並增多。從城市化動力來審視，改革開放以來尤其是 1990 年代以來的城市化進程是地方政府主導推動的。中國經濟高速增長和城市化快速發展是在經濟全球化背景下發生的。經濟全球化對包括中國在內的發展中國家最為直接和突出的地方影響是城市空間和社會結構，中國城市化進程也表現出獨特性。因此，從全球範疇來認識中國的城市化進程、研究城市化政策、制定城市化戰略，不但十分必要，而且具有現實指導意義。

中國經濟高速增長和城市化快速發展，一方面極大地提高了綜合國力和人民生活水平；另一方面，也帶來可持續發展問題，如以外部動力主導的城市化進程使城市向農村地區提供的公共服務嚴重缺乏，並導致城鄉矛盾加劇；又如粗放發展方式使城市化面臨著生態、經濟、社會、安全等方面的脆弱性，尤其是在某些經濟發達的沿海城市和城市化地區甚至到了難以為繼的程度。

如何在保持經濟和城市化持續快速發展的同時，滿足可持續發展的要求？本文認為，城市轉型是必由之路。城市轉型就是要轉變經濟增長方式，保持經濟既好又快發展；就是要加強公共服務領域的制度建設，促進社會和諧發展；就是要改善環境品質與公平，促進人與自然協調發展。深圳是中國最早設立的經濟特區，短短 27 年，就從一個邊陲小鎮發展成為人口逾千萬的特大城市，創造了世界經濟和城市發展的奇跡。但同時，深圳也是全國最先面臨諸如脆弱性和可持續性等發展難題的城市。因此，深圳率先進入了城市轉型期。深圳城市轉型以全球化的進一步發展、國家發展戰略轉型和深圳-95 港合作為基礎，以公共政策作為重要手段，構建一個以發展目標產業的指引性政策、城市公共服務領域的制度建設、促進城市節點發展的空間政策為主要內容的公共政策框架，其中，城市公共服務制度建設尤為重要，它實際上是要建立一個與城市經濟發展相適應的、與城市居民工作、教育、住房、健康和福利等需求緊密相關的城市綱領，來促進城市的可持續發展。深圳城市轉型不僅是要破解自身的發展難題，更要通過積累和總結經驗，為中國發展的總體轉型提供一條可資借鑒的成功之路。

# **The Essence of Chinese Urbanism: A Macro-Historical Interpretation**

**Laurence J. C. MA**

*Department of Geography and Planning, University of Akron, Akron, OH 44325, USA*

## **Abstract**

Since the first cities emerged in China some four thousand years ago, Chinese urbanism has undergone several major stages of evolution, each with a distinct set of socioeconomic and spatial characteristics, and together they constitute a complex historic mosaic of urbanism. This study takes a macro-historical view of Chinese urbanism in an attempt to distill the essence, especially its functional component, of the Chinese city, emphasizing the most fundamental, salient and dominant nature of the city in different historical periods from antiquity to the present. Whereas the notion of “change within tradition” as a form of continuity is applicable to some of the salient aspects of Chinese urbanism, the evolution of the Chinese city has also been marked by major breaks with past urban traditions, especially in the last 150 years. The evolution of Chinese urbanism in the pre-modern eras was marked by an increasing trend of plebeianization of urban culture shaped by urban commoners. On the other hand, modernization efforts since the late nineteenth century have fundamentally altered the economic role of the city from essentially centers of consumption to dominant centers of production. Post-reform urbanism has witnessed the creation of a quasi-capitalist regime of accumulation which contrasts sharply with the state-biased accumulation regime of the socialist era. Whereas the forms, functions and the processes of change of the Chinese city have been highly complex in the nation’s long history, the dominant role of the state has been persistently strong in shaping the nature of Chinese urbanism.

## **Space and Place after Full Privatization of Urban Housing: The personal and societal consequences of new property relations**

**Deborah S. DAVIS**

*Yale University*

### **Abstract**

Inspired by the work of humanist geographer Yi-fu Tuan (段義孚), this paper explores what Tuan calls the “intimate experience of place.” Drawing on data from focus groups, household survey, and internet blogs, I explore how analyzing the subjective experience of home ownership complements the conventional focus on financing, square meters, and quality of the built environment. More narrowly the presentation draws on three recent projects to demonstrate the advantage of incorporating analysis of experience into assessing the social consequences of the rapid privatization of home ownership. The first builds on a statistical analysis of the interaction between home ownership and attitudes to outsiders (外地人), the second on focus group discourse that identifies logics of entitlement that evolve from resident’s historical experience with particular properties, and the third on reading of recent blog postings by self identified “housing slaves” (房奴).

## Urban Housing Reform

# Does Shanghai's Housing Reform Meet the End? Analysis of the Property Right Economics Approach

Ruey-Hua LIU<sup>1</sup>, Ping-Hsiang HSU<sup>2</sup>

*1. Department of Economics, National Tsing-Hua University, Hsinchu City, Taiwan*

*2. Department of Tourism and Leisure, Diwan University, Tainan, Taiwan*

## **Abstract**

In the process of China's economic reform, dual-track approach becomes an institutional characteristics of incrementalism. From the theoretical views of property rights and transaction costs, the authors try to identify the meanings of dual-track approach for housing market and barrier of merging two different systems. Some factors, including larger group of overseas home buyers and the political pressure from entering WTO, raise the opportunity cost of dual-track system. Therefore, the authors propose there should be an institutional change when the cost of the dual-track system is larger than benefit.

Since housing value is affected by many variables, such as location, criminal rate, public service and job opportunity...etc., housing reform also needs institutional support from other sectors. Therefore, the authors conclude that Shanghai's housing reform has not accomplished yet. Cancellation of the dual-track system does not mean the end of Shanghai's housing reform.

**Keywords:** Shanghai, housing reform, dual-track approach, institutional change, relative price

# Housing Reform and Housing Affordability in China: A Case Study of Shanghai 1995-2006

Jie CHEN<sup>1</sup>, Qianjin HAO<sup>2</sup>

*1. Management School, Fudan University, Shanghai, China*

*2. Environmental Science & Engineering Department, Fudan University, Shanghai, China*

## **Abstract**

This paper describes the most recent developments of housing policy and housing marketing in China. A key concern of this paper is to assess the development of housing affordability conditions of urban residents before and after the market-oriented housing reform. We use the Shanghai housing market from 1995-2006 as a case study. We propose a dynamic price-to-income ratio analysis framework that highlights the crucial roles of economic growth as well as housing finance instruments in supporting households' home purchase affordability. The newly developed thinking of housing affordability measurement, the residual income approach, is also employed in this paper. Based on this approach, we compute the occurrence probability of housing-induced poverty, define the target level of maximum affordable housing prices, and suggest the magnitude of housing assistance that should be provided to low-income households in Shanghai. No matter which approach is used, strong statistical evidences show that there is a sustained large gap between housing prices and the population's incomes in Shanghai. Less than 20% of Shanghai residents could afford to buy a new home. Nonetheless, the overall housing affordability situation in urban China is much more complicated than what these figures can reflect.

**Keywords:** housing affordability, residual income approach, dynamic price-to-income ratio, China housing reform



## The Forest City. Homeownership and New Wealth in Post-industrial Shenyang

Luigi TOMBA

*Department of Political and Social Change, The Australian National University,  
Canberra, Australia*

### Abstract

Based on 12 months of field work and participant observation in Shenyang in 2006 and 2007<sup>1</sup> this paper investigates the role of the new middle classes in the making of post-industrial Shenyang and in the redefinition of its moral geography.

It suggests two empirical questions. One is structural, about the relationship between the individuals' position *in the system* (type of employment, family background, relationship to the state and residence) and their ability to gain access to quality housing during the first two decades of the housing reform. We argue that the ability of certain households to profit from state policies and get ahead in the housing market is largely dependent on their position within the system, although the structure of incentives is changing rapidly to the disadvantage of the younger generation. Housing remains, in our observation, an important element of the state's *funding* of the new rich and a determinant of the different paths to wealth experienced by different (entrepreneurial, professional and public servants) groups within the new rich.

The second question concerns the role played by the new wealthy in changing the city, especially by providing an alternative source of value-making and by embodying the aspiration to a competitive, clean, modern and efficient city that is replacing Shenyang's traditional image of a dirty and conflict-ridden industrial site. While industrial production moves to new anonymous peri-urban areas crowded by a transient population, traditional city districts are reconfiguring themselves and competing with one another for a slice of the commercial, service and residential economy. The different levels of the government play a major role in promoting this transition, one where there is a clear role for the wealthier groups.

---

<sup>1</sup> Research for this chapter is funded by an Australian Research Council Discovery Grant 2006-2008 (DP662894). The authors spent a total of 12 months in Shenyang between 2006 and 2007, visited over 20 communities, and conducted over 200 one-to-one qualitative interviews with residents, local cadres, community officials and managers.

## 住房市场化改革与社会阶层

李煜 卢汉龙

*Institute of Sociology, Shanghai Academy of Social Sciences, Shanghai, China*

### 摘要

城市居民的住房差異曾社會主義制度下階層差異的一個主要方面。本文試圖分析在近20年的住房市場化改革後，住房不平等的機制和後果發生了什麼樣的變化。筆者使用住戶住宅搬遷史資料，從產權、住房面積和住房質量等方面，分析在住房體制改革和房價飛升背景下，描繪社會各階層在住房市場中的不同境遇。

## Migrants and Villages in the City

## **Housing Conditions of Migrant Workers in Shenzhen**

**Ya Ping WANG<sup>1</sup>, Yanglin WANG<sup>2</sup>, Jiansheng WU<sup>3</sup>**

<sup>1</sup> School of the Built Environment, Heriot-Watt University  
Edinburgh, EH14 4AS, UK  
Tel: +44 (0)131 451 4456  
Fax: +44 (0)131 451 4617  
Email: ya\_ping.wang@hw.ac.uk

<sup>2</sup> College of Environmental Science, Beijing University,  
Beijing, China  
Tel/Fax: +86 10 6275 1360  
ylwang@urban.pku.edu.cn

<sup>3</sup> College of Environmental Science  
Shenzhen Graduate School of Beijing University  
Shenzhen, China  
Tel: +86 755 6203 5508

### **Abstract:**

Migrants have been the main labour force that helps to maintain the fast growth of the urban economy over the past two decades, but majority of them are classified by the government as temporary residents or floating population and live in poor and overcrowded accommodations. This paper reports the findings from a joint project carried out by researchers from Heriot-Watt University and Beijing University. The project aims to give a systematic assessment of housing conditions of migrants in Shenzhen, one of the prosperous coastal regions. It surveyed 807 migrant households sampled in 15 so-called urban villages. Housing conditions among migrants are poor in general in comparison with official residents in the city. Some better off migrants could afford to rent a small flat with a kitchen and toilet; others are crowded in single rooms and sleep in bunk beds. Although absolute poverty seems not a major issue because most migrants are working and earning a wage, in comparison with the modern urban living standard enjoyed by the professionals and officials, relative poverty among migrants is a major problem. The challenge for Shenzhen is that as a new city, the proportion of migrants among the total population is extremely large. To expect all these 'temporary' residents to move away from the city to somewhere else is unlikely, but to raise the living standards of this large group to match that of the official urban residents will be a big task.

### **1. Introduction**

More than 100 million migrants live in cities and towns in China. So far, the government has made very little effort to provide affordable housing for them. At the same time, China's cities do not have the kinds of large scale slum settlements that are found in the cities of other developing countries. This, however, does not mean that China has solved the housing problems of migrants. To the contrary, most migrant workers live in poor conditions either at their work sites or in low quality housing

concentrated at the urban rural interface zones. Migrant labourers are classified as temporary or 'floating' population and receive negligible social or economic support from municipal governments (Ma and Xiang, 1998; Devin, 1999; Fan, 2001; Goodkind and West, 2002; Solinger, 1999; Wu 2002, 2004, 2006; Yang 2000).

In the 1980s and early 1990s, migrants in Chinese cities referred mainly to those labourers who originated from rural areas. Over the past few years, however, owing to an increase in urban to urban migration, the composition of the migrant population has become more complex. In particular, intensifying competition in the urban job markets has caused many college and university graduates to leave their home cities and search for better paid employment in coastal areas. In many coastal cities, the numbers of international and urban to urban migrants have also been increasing. The different backgrounds of the migrants affect their housing requirements. Highly paid international migrants may live in rich areas or gated communities. University graduates who have moved from other cities (mainly inland cities where job opportunities were rare) tend to rent temporary accommodation while they look for a job. Then, once they have found a job and earn a more stable income, they move into mainstream housing areas, often purchasing their own place and integrating with the locally registered urban *hukou* residents.

Rural migrants and poor urban to urban migrants tend to concentrate in special areas (Xu, 2001; Shen, 1995). Construction and industrial workers of large factories tend to live collectively in dormitories, usually provided by their employers. Most construction workers are married men who leave their wife and children in the villages. They commonly share a room with several other men. In the industrial areas of fast growing coastal cities, some factories provide dormitories for their production line workers. Facilities in dormitories were very basic and bunk beds were common. Apart from beds, there was usually a washing area and toilet in each room. Construction and factory workers seldom cooked for themselves and instead bought food from the factory run canteen.

Other migrants not employed by large organisations have to find their own accommodation. They live mainly in private rental housing in poor areas in cities (Mobrand, 2006; Yang et al, 2005; Lu and Song, 2006). The location and conditions of these areas vary from city to city. They usually fall into one of two types: traditional and old housing areas in the city centre and farmers' housing in suburban villages. Property boom and urban redevelopment programmes have renewed much of the old town areas of most large cities. However, in almost every city, there are small pockets of traditional housing areas, situated at difficult locations such as on steep slopes, along railway lines and in between large organisations. Houses in these areas are mostly owned privately by local residents. Better-off original residents have moved to new houses in other areas, but they keep the old houses to secure compensation when the areas are redeveloped. These houses or rooms are rented out to migrants. The original density of houses in these areas was relatively low. Because of population increase, every family made additions to the original structure to maximise indoor space. The open spaces between buildings were gradually covered up. The infrastructure in these localities was however very poor, with water pipes running along the street and sewage flowing out into open or covered up ditches. The majority of families did not have internal kitchens and toilets; and many families cooked their food on stoves outside the house. (Wang, 2004)

The most prominent areas occupied by migrants in China's cities are the so-called urban villages or villages inside cities – *chengzhongcun*. Urban villages were originally rural settlements located in suburban areas. Because of urban expansion, the agricultural land of these villages was gradually taken over for infrastructure and property development, and these villages physically became incorporated into urban built-up areas. However, these villages maintained their rural organisation and most farmers remained outside the formal urban management system. On account of less stringent planning restrictions and regulations, housing in these settlements became the prime locations for the poor, particularly rural migrants. Rural migrants also found the living environment more acceptable and less intimidating than in other settings because the landlords were farmers. Also, the rent was normally cheaper than in other areas.

Over the recent years, migrant housing has attracted a lot of attention among government officials and academic researchers (Wang and Murie, 1999; Wang, 2003 and 2004; Wu, 2004 and 2006; Shenzhen Municipal Housing System Reform Office, 2004). There is consensus now among researchers and policy makers that in every region, the quality of the housing for migrants is below the average standard and many migrants experience problems in housing and living in poverty. There are however, not many studies emphasizing the different housing requirements from migrants with different social and economic background. Our research aims to give a systematic assessment of housing conditions of migrants in Shenzhen. Shenzhen has developed from a small board town to a large city with over 6 million of residents in a short period of 25 years. The majority of population is migrants who have been living in the city for many years. Apart from examining the general housing conditions in migrant dominated areas, we also compare the housing situations of different groups of migrants. It addresses questions such as does the difference in *hukou* status has an influence over housing conditions in regions where there is a mix of rural to urban and urban to urban migrant population? What relationship between housing and poverty can we identified in the fast urbanising and prosperous region? How does migrant housing condition in Shenzhen compare with other cities?

## 2. Data Collection

Shenzhen Municipal Government carried out a research project about migrant housing in the city in 2004 (Shenzhen Municipal Housing System Reform Office, et al, 2004). The main aim of the study was to assess the *housing demands* from migrant workers. The study covers all possible social groups of migrants working in the city. The study also found that housing conditions among industrial workers and construction workers who lived at factory dormitories and work sites were generally poor and overcrowded. The study also includes many white collar office workers who do not have local *hukou* registration, but their housing requirements are different from other migrants.

Rather than to repeat the work of the Municipal study, our project focused on the relatively poor migrants working in the city, mainly living in the urban villages<sup>2</sup>. Our study also emphasizes the housing conditions of *migrant households* rather than individual living experiences. Our household survey questionnaire includes more

---

<sup>2</sup> Our project was planned without the knowledge of the Municipal study. Our initial aim was to include migrants who live at factory dormitories or construction sites. After reviewing the works from the municipal study, we decided to focus on the urban villages.

questions on social and economic profile of migrants and their families, including characteristics of households, employment (head of households, and partners), income (individual and households), and housing<sup>3</sup>.

A sample size of about 800 households was pre-determined on ground of representation and resources available. After a period of initial investigation, we adopted a staged stratified systematic sampling method:

- 1) We divided the sample into three different areas of the city roughly according to the size and importance of these areas: central areas, other areas inside the SPE zone boundary, and areas outside the special economic zone.
- 2) In each of these three areas, a number of urban villages were selected according to scale, economic sector and geographical locations (Figure 1).
- 3) Within each of the selected village, individual migrant households were selected systematically.

---

<sup>3</sup> In preparing the survey questionnaire we maintained the basic structure of a questionnaire we used early in Shenyang and Chongqing for the purpose of comparison, but introduced new questions to reflect the particular features of migrant population in Shenzhen.

Table 1 Sample allocation and distribution

Areas	Allocated sample size	Sampling villages
Central Areas	240	Luohu District: <i>Xiangxi Village (60/57), Hubei village (60/60)</i> Futian District: <i>Futian Village (60/57), Shawei Village (60/65)</i>
Other areas inside SEZ	360	Luohu District: <i>Dushu Village (60/59) , Shuibei Village (60/66)</i> Futian District: <i>Xiameiling/Hebei Village (60/60), Shameiling Village (60/60)</i> Nansha District: <i>Baishizhou Village (60/59) , Pingshan/Tanglang Village (60/60)</i>
Outside SEZ	200	Baoan District: <i>Langxin (60), Tianxin (40)</i> Longgang District: <i>Buji (48), Longlin (56)</i>



1 · Futian village; 2 · Shawei village; 3 · Xiangxi village; 4 · Hubei village; 5 · Shangmeilin, Xiameilin and Hebei villages; 6 · Shuibei village; 7 · Dushu village; 8 · Baishizhou village; 9 · Tanglang village; 10 · Buji and Longlin Villages; 11 · Langxin and Tianxin villages

Figure 1 Location of case study urban villages

It is difficult to achieve a random sample in so many villages due to various administrative, political and practical reasons. We studied the social and economic profiles of residents in these villages and mapped the living pattern carefully before drawing the survey sample. In each village, we firstly selected typical or main streets; along these streets, we then selected buildings at equal intervals; within each multi-floor building, we included only one household on each floor for interview. The sampling principle is to make the sample as systematic and regular as possible to ensure a good representation of the migrant population. All interviews were conducted inside the homes of migrants. There was no on street sampling or interview.



Getting access to the sampled migrants was a problem, because of the working patterns of the migrant themselves and the entry control systems of most buildings. There was only a very short period in which interviews can be carried out in each week often at the evenings of Saturdays and Sundays. Because of these problems, interviews were conducted over a five month period from November 2005 to March 2006.

### **3. Social and economic profile of migrants**

The 2004 migrant housing problem survey conducted by the Municipal government found that migrants in the city were dominated by the young adults. About 75 percent of them were between 20 to 33 years old. Nearly 45 percent of migrants originated from other cities or towns. About 65 percent of migrants in the city lived as individuals or families; the rest were the so-called collective households living at dormitories at work sites. The majority of migrants were engaged in the low level, but stable jobs. Income among migrants was generally low: average monthly income 1149 yuan per month, in comparison to the official city average of 2194 yuan per month; most migrants earned less than 2000 yuan per month. (Shenzhen Municipal Housing System Reform Office, et al, 2004).

As indicated in the above section, this study focuses on the urban villages and migrants as families. While our findings confirm these general observations of the earlier Municipal study, they show some distinctive features of the migrants living in urban villages. The average age of migrant head of household is 30.7 years. Male heads of households tend to be younger than females, and those who stay in the city as single are younger than those headed a family. There is no obvious age difference between those from urban areas and those from rural areas. The length of stay in the city ranged from less than a month to 30 years. The average length is however 6 years for heads of households and 7 years for their partners. Most single person arrived at the city in their early 20s (20-21) and most head of households and their partners arrived at the city in their middle 20s (26-27). Over 99 percent of the migrants (heads of households and their partners) are healthy and very active in works. About 66 percent of migrants living in urban villages are from rural areas. Of the 807 cases, 47 percent are individuals who live on their own (including those sharing with other individuals) and 53 percent live as families (Table 2). Over 80 percent of the families surveyed are headed by a male.

Table 2 General migrant household characteristics

	Origins of residence registration				Total	
	Urban		Rural		No.	%
	Number	%	Number	%		
<b>Household type</b>						
Single person household	153	56.5	223	46.6	376	46.6
Families	118	43.5	313	58.4	431	53.4
<b>Sex of head of household</b>						
Male	189	69.7	374	69.8	563	69.8
Female	82	30.3	162	30.2	244	30.2
<b>Marital status of head of household</b>						
Single	122	45.0	176	32.8	298	36.9
Married/Divorced/Other	149	55.0	360	67.2	509	63.1
<b>Number of children of married couple or divorcee</b>						
No child	35	25.0	23	6.5	58	11.7
1	66	47.1	139	39.3	205	41.5
2	29	20.7	133	37.6	162	32.8
3	8	5.7	46	13.0	54	10.9
4	2	1.4	9	2.5	11	2.2
5	0	0.0	4	1.1	4	.8
<b>Final education level of the head of household</b>						
Not finished primary School	5	1.8	14	2.6	19	2.4
Primary School	12	4.4	62	11.6	74	9.2
Junior Middle School	44	16.2	280	52.2	324	40.1
High School	67	24.7	117	21.8	184	22.8
Career/Technical Certificate	38	14.0	33	6.2	71	8.8
College Diploma	50	18.5	21	3.9	71	8.8
University Degree	48	17.7	8	1.5	56	6.9
Postgraduate degree	7	2.6	1	0.2	8	1.0

Over 63 percent of the migrants are married, and the proportion among rural migrants is higher. A higher proportion of female migrants and urban migrants are single. Nearly 20 percent of those living on their own in the city are married, but their partner stayed back at original home. Marriage within the same hukou category is still predominated, but there are cross marriages between these originated from urban areas and those from rural areas: 10.4 percent head of households from urban areas married with a rural migrant, and 23.5 percent of female head of households from rural areas married with someone with an urban hukou registration. Off the married heads of households, 84 percent have their partners living with them in Shenzhen; off migrants living as single in the city, nearly 80% were not married at the time of interview. Majority of the married migrants have child/children. Off those married with child/children, 62 percent of them have children living with them in the city. Over 50 percent of married rural migrants have more than 1 child. While the educational background of these migrants is generally poor in comparison with official urban residents, the rural migrants tend to have a particularly poor educational background.

#### 4. Housing condition

Two types of housing could be found in urban villages: private housing built by individual families, and collectively owned housing by the village. Most villages in

Shenzhen city have reformed their traditional administration structure and have become so-called Shareholder Companies Ltd, in which the original villagers are shareholders. The collectively owned housing has been developed by the SC Ltd on collectively owned land and rented out. The rent from these properties is used to pay the SC Ltd management fees or for income distribution to the villagers. Each building owned by SC Ltd usually specialises in one form of housing, for instance, dormitories for single workers or small units for families. Privately owned rental housing varies substantially between buildings and also within each building. Each private building reflects the wealth of the family that has built it. Richer families build better and taller buildings (plot size is similar for all villagers). Inside each building, the units available for rent also varies. Some are single person units offering one bedroom while others are family units that comprise up to three bedrooms and a hall area.

There are differences between the recently built new areas and the older traditional areas in each village (Figure 2 and 3). Old parts are typically developed before 1980s. Houses in this part are old, low rise, poor design and quality. They also have various extensions. New parts of villages are dominated by multi-storey buildings with improved design, better facility and privacy. In general, poor migrants tend to rent in the old parts of villages where conditions are poor and rent relatively low; and better off migrants rent in the new parts of villages. Buildings in new areas inside villages are crowded together at high density cause poor lighting and ventilation. High-rise buildings on small family land plots are so close to each other that the locals nicknamed them ‘kissing buildings’ or ‘shake hand buildings’; neighbours can shake hands through their windows. In villages, there is a dearth of green or open spaces.



Figure 2 New housing in urban villages.



Figure 3 Old housing in urban villages

#### 4.1 Housing Sources

The 2004 Municipal Government survey shows that 66.4 per cent of migrants had found their housing from the market and 20.5 percent had obtained their housing via their employers. In the same survey 9.6 percent of migrants were found to own their

own housing while 2.5 percent reported living with relatives or friends (Shenzhen Municipal Housing System Reform Office, 2004). The sources of migrants housing in urban villages differ from the overall pattern. Most migrants in urban villages live in rental housing and that very few own a home. Among the 107 households whose houses were provided by employers, 14 (13%) pay the rent. In relation to family types, one person households had a higher proportion of housing provided by employers (23.7%) against 4.2% among 2 or more person households. There is also a slightly higher proportion of single person living in houses owned by friends or relatives (2.7% against 0.9%). Female headed households have a higher proportion living in employer provided housing in comparison with male (17.6 against 11.4%). The comparison with our early study of Shenyang and Chongqing is very interesting. Although the survey were done at different time, in all cities, over 80 percent of migrants rented their housing.

There is no significant difference in housing tenure between the urban and rural registered migrants. Rural to urban migrants shows a slightly higher proportion living in employer provided housing, (14% compared with 11.8%). This indicated that the different origins are less important in relation to housing sources. The difference is more important between the settled local insiders and the ‘floating’ outsiders. Ordinary urban and rural migrants face the same difficulties in housing.

Table 3 Sources of housing and comparison with other cities (%)

Housing Tenure	Shenzhen		Shenyang	Chongqing
	No. respondents	%	%	%
Owners	11	1.4	8.7	1.2
Provided by employers	107	13.3	5.0	5.7
Rented from the market	675	83.6	82.6	81.7
Borrowed from friend/relative	14	1.7	1.9	2.5
Total	807	100.0	100.0	100.0

*Notes: Shenyang and Chongqing surveys were conducted in 2000; Shenzhen survey in 2005/06.*

#### 4.2 Space

Sharing a room or a flat with other migrants is very common (Table 4, 5 and 6). Those who share rooms with other families or individuals have the lowest standard of living. On average four persons share a room with an average floor space of only 7.7 square meters per person. In some instances over twenty people share a room, and some individuals have only 2 or 3 square meters of living space. Households originated from rural areas, female headed households, and single person households show a higher proportion of sharing and lower proportion of living in an independent house unit. Although the majority of those who share a room are one person households, there are 25 (5.8%) families in the sample with 2 or more persons sharing a room with other people. If shared by married couples, wooden board, cardboard or curtains are usually used to keep some privacy. Most halls in flats tend to be used as another bedroom for either children or other tenants.

Within the sharing a room group, comparison on personal living floor space between rural to urban and urban to urban migrants was made. The average space used by urban to urban migrants is bigger than the rural to urban migrants, 9.5 to 7.0 square metres per person. This result is also statistically significant. There is however no significant difference between males and females. Nearly 43 percent of respondents

share with one other persons (Table 6). Urban to urban migrants and females have fewer people sharing than the rural to rural migrants and males.

Nearly 60 percent of migrants interviewed live in self-contained units. Again migrants from other urban areas tend to have more space than rural migrants. There is also a clear difference in the average floor space per person between male and female headed households with the female headed households tend to have more housing space. The reason for this could be that average household size of the female headed ones is much smaller than the male headed ones (1.72 persons against 2.61 persons), while the most common house size in urban villages is around 40-45 square metres.

Table 4 Housing condition: Sharing

House sharing	No. of households	%	Floor space per person (m <sup>2</sup> )	
Sharing a room with others	187	23.2	7.7	
Family use 1 room	131	16.2	13.0	
Family use 2 rooms	5	0.6	42.6*	
Family use 1 whole unit	479	59.4	23.7	
Other	5	0.6	25.6	
Total	807	100.0		
	One person households		Two or more person households	
	No. of Households	%	No. of households	%
Sharing a room with others	162	43.1	25	5.8
Family use 1 room	57	15.2	74	17.2
Family use 2 rooms	2	0.5	3	0.7
Family use 1 whole unit	152	40.4	327	75.9
Other	3	0.8	2	0.5
Total	376	100.0	431	100.0

Note: \* The small number of cases and the unexpected large space per person may indicate that this category is not reliable. Respondents may have included all housing areas including those used by other families sharing with them.

Table 5 Housing floor space

a) Among households that has exclusive use of a housing unit					
	No. of respondents	Average housing floor space of the unit	Standard Deviation	Average housing floor space per person	Standard deviation
From urban areas	181	43.4	21.3	26.7	18.8
From rural areas	298	45.2	24.8	21.9	16.2
Male	355	45.8	23.1	22.1	16.8
Female	124	40.8	24.3	28.5	18.1
b) Among those who sharing a room					
	No of respondents	Average housing floor space per person	Standard Deviation	Average No. of persons in room	Standard deviation
From urban areas	46	9.5	6.1	3.0	2.3
From rural areas	131	7.0	5.4	4.3	3.2
Male	114	7.4	5.9	4.33	3.5
Female	63	8.1	5.3	3.4	1.9
Overall		7.7 (1.5-45)	5.7	4.0 (2-20)	3.1

Table 6 Sharing a room: number of persons in room and floor space per person

Number of persons sharing a room	Number of respondents	%
2 people	77	42.5
3 people	32	17.7
4 people	28	15.5
5 to 10 people	36	19.9
10 to 20 people	8	4.4
Total	181	100.0
Housing floor space per person		
Less than 2 m <sup>2</sup>	13	7.3
2.1-4 m <sup>2</sup>	37	20.9
4.1-6 m <sup>2</sup>	49	27.7
6.1-8 m <sup>2</sup>	20	11.3
8.1-10 m <sup>2</sup>	27	15.3
10-15 m <sup>2</sup>	18	10.2
Over 15 m <sup>2</sup>	13	7.3
Total	177	100.0

Housing floor space used by migrants is smaller than the cities average. Most halls in flats are used as another bedroom for either children or other tenants. Some larger rooms are subdivided and separation materials are either woodchip board or cardboard. The average figures however presented in these tables also show that apart from those who share a room with others, overcrowding seems not a very serious problem.

Housing floor space in each unit in urban villages is much smaller than the average new house units developed by commercial developers. The buildings look very similar from outside, the division inside differs. Some buildings offer 3 relatively bigger units on each floor, while other buildings offer 6 very small one bed room units on each floor. Few years ago, many large flats (2-3 bed rooms) were on the market;

recently, subdivisions were carried out to increase the number of rentable rooms. A 3 room flats may rent for 700-800 yuan per month; a good sized single room could rent 400 yuan. Many new buildings were constructed with small flats or even single rooms with toilets and cooking areas.

There are also importance differences in how these spaces are used. Even in the same building, space used by migrants differed substantially. In one of the buildings that we studied, one family of three lived in a three bedroom unit which included a small hall, a toilet, and a kitchen. By contrast, in the unit next door, a two bedroom unit with a hall was used by no less than eight people. A couple lived in one bed room; four and sometime even five singletons used the other bed room, and two singletons slept in the hall. In another case, the resident reported that only 3 persons live in the flat, but more beds were in the house. Residents claimed that these were for occasional visitors. This could be the case, or the resident may have under reported the number of tenancy for fare of landlord or local authority penalty. All tenants are required to register with the local Private Rental Housing Management Office. Not all migrants are willingly doing so. In a one bed room flat, 5 bunk beds were used by 10 young girls, which used up almost all the available space. One two bed room flats of around 40 square metres was used as a small company's dormitory shared by 10 people (from 3 families).

#### **4.3 Facilities**

Facilities inside migrant housing are generally poor: 37 per cent migrants did not have their own toilet, bathroom, and kitchen; 35 percent do not have exclusive access to a water tap; over 40 per cent did not have showers; 67 percent do not have a refrigerator to keep food; and only a quarter of them had air conditioning for the hot summer and have a washing machine. Moreover, even though gas supply has become normal, most migrants still use gas bottles or coal as their main fuel (Table 7). Migrants originated from urban areas tend to have better access to facilities than rural migrants; families have better access than single person households; and male headed households have better access than female headed households. Some migrants put coal fire stones or gas cookers inside the bedrooms.

Most rooms and flats rented by migrants are unfurnished. Migrants have to buy their own furniture. For this reason, the standard of furniture varies across families, and household furniture reflects the nature of the residents' work. We visited a room of about nine square metres shared by two married couples. Apart from beds, an old radio, two hand washing basins, a couple of stools and two sets of gas cookers, there were no other furnishings. In another small room, three young men slept on the floor and there was no bed; they worked in shifts and the sleeping area was used in rotation. They did not have any furniture, just some cleaning utensils and their travelling suit cases. Some migrants also use their rental home as a production place. Shop owners' houses for example look likes shops or storerooms; restaurant owners' houses resemble a kitchen; and waste collectors' rooms are filled with old newspapers and flattened cardboard. Household furniture provides a good indication of how long the tenants have been in the city and their long term plans. Those who had stayed in the city for several years and planned to stay on had some reasonable furniture.

Table 7 Facilities in house (% within group)



Exclusive use of:	Overall	From Urban Areas	From Rural Areas	One person households	Families	Male headed	Female headed
Kitchen	61.8	71.2	57.1	48.1	73.8	65.5	53.3
Toilet, bathroom	62.8	72.7	57.8	48.9	74.9	66.3	54.9
Shower	57.4	64.6	53.7	43.9	69.1	60.4	50.4
Bath	8.1	7.0	8.6	5.1	10.7	7.8	8.6
Water tap	64.7	72.7	60.6	50.0	77.5	68.4	56.1
Refrigerator	33.1	41.7	28.7	20.1	43.6	33.7	31.6
Washing machine	23.0	31.0	19.0	16.2	29.0	24.3	20.1
Telephone	26.3	27.7	25.6	17.3	34.1	27.9	22.5
Piped gas supply	3.0	7.4	0.7	3.5	2.6	3.2	2.5
Bottled gas	63.3	64.6	62.7	45.2	79.1	66.6	55.7
Air condition	24.1	29.5	21.3	14.6	32.3	23.3	25.8
Computer	22.8	38.4	15.0	23.1	22.6	26.3	14.8
Internet	17.3	30.3	10.8	17.3	17.4	20.4	10.2

#### 4.4 Income and Rent

Most migrants, especially the heads of households are working. The unemployment rate is very low at 6.7%, which include some migrants that have just arrived at the city and are searching for job. The largest employment categories among the heads of households is working in a private company (35.4%), followed by self employed (29.5%), and working for other family businesses (8.2%). A very small proportion (6.4%) is employed by public sector. In relation to economic sectors, the largest proportion of migrants are employed in retail, hotel, restaurant and other services (50.8%), followed by manufacturing (19.3%) and construction (9.2%). The proportion of people employed by the highly paid public and finance sectors is small. Of the heads of households, about a quarter of them are either managers of private companies or owners of small businesses, the rest are ordinary workers or office staff.

With the relatively poor employment profile, income among the migrants is low in comparison with the city average. The 2004 Municipal Government survey of migrants found that the average monthly income was only 1149 yuan, far below the average personal income in the city (2195 yuan). Table 8 shows that the median monthly wage income 2000 yuan and 1500 yuan for heads of households and their partners respectively. The mean income is higher than the median income in every group and the standard deviation is big. The mean income of heads of households is also slightly higher than the overall average reported in the city (2637 yuan). This indicates that wage income among migrants living in urban villages varies substantially and there is a big gap between the richer ones and poorer ones. By focusing on the urban villages we have excluding a large number low income workers living in factory dormitories and construction sites.

There is also clear differences between migrants originated from urban areas and those originated from rural areas. While the average income among the heads of household from urban areas is above the overall city average, the mean for those from rural areas is much lower than the city average. Male migrants tend to earn more than females. Part b) of the Table gives a better picture of income distribution. About 62 percent of heads of households earns less than 2000 yuan per month (the median figure have been influenced by the large number of people who earn 2000 yuan); among the partners, 64 percent of them earn less than 1500 yuan per month.

Table 8 Monthly income among migrants

a) Median and mean monthly income				
	No of respondents	Median monthly income	Mean monthly income	Standard Deviation
All head of households	745	2000	2749	3630
From urban areas	248	2900	3780	4959
From rural areas	497	1500	2235	2591
Male	537	2000	3081	4127
Female	208	1500	1891	1489
Living alone	348	1900	2320	1861
Living with family	397	2000	3125	4627
All partners	222	1500	2082	2318
From urban areas	59	2000	3181	2948
From Rural areas	163	1200	1684	1903
Male	65	1500	2926	3147
Female	157	1200	1733	1770

b) Income distribution

	Income per capita		Head of households		Partner	
	No. of Households	%	No. of respondents	%	No of respondents	%
<500	77	10.0	19	2.6	13	5.8
501-1000	205	26.7	165	22.1	77	34.6
1001-1500	133	17.3	124	16.6	51	23.0
1501-2000	122	15.8	153	20.6	29	13.0
2001-2500	45	5.9	40	5.3	7	3.2
2501-3000	55	7.1	77	10.4	15	6.7
3001-4000	42	5.5	49	6.6	8	3.6
4001-5000	48	6.2	57	7.6	9	4.1
5001-10000	33	4.3	51	6.9	10	4.6
>10000	9	1.2	10	1.3	3	1.4
Total	769	100.0	745	100.0	222	100.0

Housing rent paid by migrants in urban villages also varies. On average, migrants pay 534 yuan rent for housing a month. Those who living on their own or shared with others pay less and those who live with their families pay more; single females pay more than single males; male headed families pay more than female headed families; migrants from other urban areas pay more than migrants from rural areas (Table 9). Although the rent seems not extraordinarily high in a very prosperous city, rent actually has taken a large part of migrant workers income. On average, migrant spend 24 percent of their total household income on rent. About a quarter of them spend more than 30 percent income on rent. We compared income and rent levels in urban villages located in the central areas and those located outside the main built up areas. Both income and rent in suburban villages are lower than the central areas (Table 10).

Table 9 Average monthly rent paid by migrants

	No. of respondents	Average monthly rent
Whole group	805	534
One person households	375	422
Male	217	403
Female	158	448
From urban areas	153	512

From rural areas	222	360
Sharing a unit with others	182	342
Sharing a room with others	130	203
Multi-person households	430	632
Headed by a male	344	640
Headed by female	86	600
Family head from urban areas	118	741
Family head from rural areas	312	590

Table 10 Income and spending: a comparison between central and suburban districts

	Three Central Districts		Two Suburban Districts	
	No. of cases	Average	No. of cases	Average
Heads of households' monthly income (Yuan)	558	2892	187	2322
Partner's monthly income (yuan)	170	2336	52	1252
Monthly income per capital	577	2299	192	1697
Total monthly housing costs (rent, mortgage repayment, tax, fees)	520	779	186	433
% of income spend on housing	496	25.6	176	21.8
% of income spent on food	573	24.5	191	29.0
% of income spend on food and housing	494	50.3	175	52.1

#### 4.5 Affordability

Income and rent levels are the main factors that influenced migrants housing choice. With most migrants earn less than 2000 yuan per month, housing in urban villages become the most popular choice. Housing affordability is also affected by other factor such as cost of food and travel. Buying food is always a major spending among migrants. On average migrants used 26 percent of their income on food each month. Rent and food took away half of total household income for over 40 percent of migrants in the sample (Table 11). It is not surprising that nearly 68 percent migrants surveyed thought their current house in urban villages is the most suitable choice for them. This does not mean that urban villages are the ideal living places. A large proportion of migrants wish to own a house in a properly built housing estate (Table 12). Over 51 percent of migrants from urban areas have plans to buy a house in the city and the 31 percent of rural migrants in the sample also have such plans.

Table 11 Housing and food costs

Percentage income spent	On housing		On food		On housing and food	
	No. of cases	%	No. of cases	%	No. of cases	%
Less than 10%	141	21.0	123	16.1	7	1.0
11-20%	221	32.9	219	28.7	44	6.6
21-30%	142	21.1	188	24.6	110	16.4
31-40%	71	10.6	124	16.2	120	17.9
41-50%	46	6.8	68	8.9	113	16.9
More than 50%	51	7.6	42	5.5	275	41.1
Total	672	100.0	764	100.0	669	100.0

Table 12 Housing choice and preferences

	Suitable house under current income		Ideal house if income increased in the future	
	No. of Respondents	%	No. of Respondents	%
Current house or rent other urban village housing	547	67.9	149	18.5
Rent government sponsored cheap rental housing	73	9.1	27	3.4
Rent private housing in commercial housing estate	70	8.7	86	10.7
Buy housing in urban village	8	1.0	44	5.5
Buy government sponsored affordable housing	52	6.5	146	18.2
Buy ordinary commercial housing	38	4.7	310	38.6
Other	17	2.1	42	5.2
Total	805	100.0	804	100.0

## 5. Discussion

Housing conditions among migrants are poor in general in comparison with official residents in the city. When most official residents have become property owners, low income migrants are excluded from the new housing estates and live in the relatively poor quality private rental housing provided by local residents and factory owners in villages or at construction sites. Housing floor space used by migrants is much smaller than permanent urban residents; housing areas occupied by migrants consisted of mainly high density or older generation buildings with poor internal and external design. They also lack modern facilities, green/open space, and pose serious fire hazards.

There are, however, important variations in housing condition among migrant population. Better off migrants could afford to rent a small flat with some modern facilities; others are crowded in single rooms and sleep in bunk beds. Housing condition is a good indication of household poverty. Within our sample, 220 (58.1) out of 376 single person households has 5 square metres or less living floor space (5 square metres are used widely as poor living condition); 101 (23.4%) out of 330 families live either in only one room or have to share a room with other people. If we take these two groups as people living in poor conditions, 40 percent of the sample (32% of urban migrants, and 44% of rural migrants) is in housing poverty. Among the other 60 percent, although absolute poverty seems not a major issue, relative poverty is also a problem, in comparison with the modern urban living style enjoyed by the professionals and officials. Same as in other cities, housing poverty is a problem among migrants, but housing problems is related to other factors. Low income and no access to government services are the two most important ones. Migrants can only improve their living conditions when their income increased. To improve their income, migrants have to be involved in training and further education. Government need to do more in labour and wage regulation.

We looked at the differences of housing conditions between migrants originated from rural areas and urban areas living in urban villages. Housing condition among migrants from urban areas is a slightly better than rural migrants. This however, could be the result of differences in educational background. Migrants from urban areas have a better educational achievement. This indicates that the influence of urban or rural hukou registration on housing among migrants in urban villages is very small.

This also reflects the factor that better educated urban migrants with good jobs may not choose urban village as their place of living.

Because of hukou restrictions, not many migrants have been integrated into the urban population system. The low income migrant population have been accumulated over the years and have reached a huge proportion. The challenge for Shenzhen is that as a new city, the proportion of migrants among the total population is extremely large. To expect all these 'temporary' residents to move away from the city to somewhere else is unlikely, but to raise the living standards of this large group to match that of the official urban residents will be a big task. Improving migrant housing will be a long process. Public supported cheap housing or housing subsidy will not be a viable option.

Housing conditions in urban villages reflect general picture of income levels among migrants. Most migrants spent a large proportion of their income on housing and food, and their ability in improving housing conditions is very limited. Although migrants negatively accepted the housing condition rather than at their choice, urban villages do provide the *affordable* housing to the low paid migrant workers. There are poor migrants in every city in China and in other part of the world. It was estimated that there are over 3 million migrants living in urban villages in Shenzhen, but migrant housing condition is no worse than that found in other cities. In comparison with what we found in Chongqing and Shenyang a few years ago, migrant housing conditions in urban villages in Shenzhen is actually better. Most migrants in the city live in new buildings. Although the quality of these buildings is not as good as properly planned housing estates, they offer better accommodation than the running down traditional areas. With the support of local village residents, millions of migrants solved their housing problem without any help from the government or public funds. They did it within the relatively low wages they have received each month, after deduction of food costs and remittance they send home.

This should also be seen in the international context. In many developing countries, fast urbanisation and industrialisation created huge areas of slums and shanty towns. We do not find such areas inside or around Chinese cities. The living condition of urban villages in Shenzhen and other Chinese cities is relatively better. In criticising the post war public housing approach in developing countries, Turner (1968, 1976) questioned the relevance of the concept of 'modern minimum standards' to the shelter needs of the poor. He focused on the function of the dwelling environment and emphasized three elements of housing: a) to provide access to employment or employment opportunities, services (location); b) to provide appropriate security of tenure (security); and to provide amenity and comfort (amenity). *All of these should be at affordable cost.* Turner believes that squatter settlement in developing countries is both positive and normal ("not a problem but a solution"); and the attempted imposition of middle-class standards upon the mass of urbanising populations leads to massive squatting and to the bankruptcy of many official 'low-cost' programmes. ... The result is enormous waste.

Due to historical reasons, urban villages in Shenzhen provide good locations to migrants. Urban villages occupy some good areas inside the city. This locational advantage enables migrants to make short travel to their works either on foot or by bus, which in turn saves them time and travel costs. Because of the shared background

of rural migrants and the local village residents, the rental tenure is relatively safe and secure for most migrants. Indeed, most migrants have more troubles in dealing with public authorities than with their landlords. The amenity in urban villages is not as good as properly built housing estates, but they are affordable. In this sense, the phenomenon of urban villages in Shenzhen should be seen as a development miracle, rather than as a problem. Apart from the cheap housing they offer, urban villages should also be celebrated for its success in providing jobs and livings for original local village residents.

Urban villages could be seen as special low level segments in the urban housing market – traditional private owners and rental market. Figure 4 indicates the owners’ and renters’ housing ladders in the city. The current system cut the urban housing market into two independent sectors: the formal market and the informal market. The formal market is only open to the official urban residents and the richer migrants, and the relatively poor migrants are concentrated into the informal rental sectors. This system artificially fragmented the housing ladders into several sections. The system does not encourage migrants to climb up the housing ladder and to become a proper urban citizen. The system also excluded a huge source of cheaper and smaller properties from the owners market. Long term plans should be made to bring together these two separate markets.

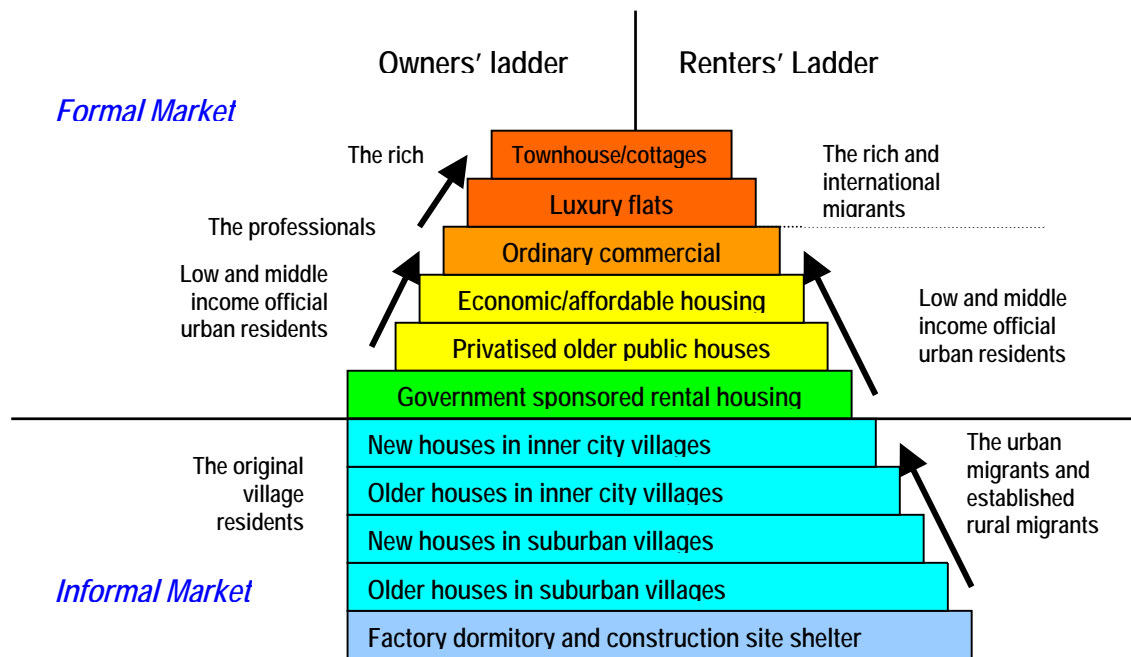


Figure 4 Housing market segments and different housing ladders for owners and renters

There are many criticisms about urban villages. They are referred by some as cancers of modern cities. Such extreme views are the results of ignorance of the values of urban villages have made to the development of the cities. They have not considered the interests of the majority low income migrants living there. There is tendency recently for large scale urban village redevelopment in order to improve the modern

image of the city. Such action must be taken very carefully to avoid the mistakes other developing countries have made and Turner has criticised. Redevelopment plans for urban villages are often drawing up with any consultation of migrants living in these villages. The action seems aiming to improve the migrant living areas; the result is the destruction of affordable housing for migrants at good locations. Poor migrants will be pushed further away into marginal locations. Large scale urban village redevelopment will lead to more serious social and spatial division. Gradual improvement, upgrading, rent regulation and other soft actions may be more beneficial and sustainable.

## 6. Acknowledgement

This paper is part of the research on Housing for Rural Migrants in Chinese Cities, supported by the British Academy. We would like to thank Professor Li Guicai for his help and advice during the data collection period; Miss Xie Miaomiao, Mr Yang Lei and Miss Ye Minting (all were research students at the College of Environmental Sciences of Beijing University) for their excellent research assistance, and those postgraduate students from the Sociology Department of Beijing University for participating in the household interviews. We would also like to thank the help provided by officials from the Ministry of Construction and Shenzhen Municipal Bureau of Housing and Property Management. Over 800 migrant households and individuals cooperated in our interviews. We would like to express our gratitude to them for their kind participation.

## 7. References

- Davin, D. 1999, *Internal Migration in Contemporary China*, Hampshire: Macmillan Press Ltd.
- Du, Y., Park, A. and Wang, S. 2005 'Migration and rural poverty in China', *Journal of Comparative Economics*, 33: 688-709.
- Fan, C. C. 2001, 'Migration and labour market returns in urban China: results from a recent survey in Guangzhou'. *Environment and Planning A*, 33: 479-508.
- Futian District Old Areas Reconstruction Bureau (with China Urban Planning and Design Academy, Shenzhen; Shiluan Property Consultant (Shenzhen) Ltd; Comprehensive Development Research Institute, Shenzhen; Shenzhen Social Science Academy; Beijing University Shenzhen Graduate School), 2004, *Step in Village, Survey Report of the Urban Village Renewal Research Project for Futian District in Shenzhen*. (Unpublished internal report), Shenzhen: Mimeo.
- Goodkind, D. and West, L. A. 2002, 'China's Floating Population: Definitions, Data and Recent Findings', *Urban Studies*, 39 (12): 2237-2250.
- Lu, Z. and Song, S, 2006, 'Rural-urban migration and wage determination: The case of Tianjin, China', *China Economic Review*, 17: 337-345.
- Ma, L. J. C., and Xiang, B. 1998, Native place, migration, and emergence of migrant enclaves in Beijing', *China Quarterly*, 155: 546-581.
- Mobrand, E. 2006, 'Politics of cityward migration: an overview of China in comparative perspective', *Habitat International*, 30: 261-274.
- Shen, J. 1995, 'Rural development and rural to urban migration in China 1978-1990', *Geoforum*, 26: 395-409.
- Shenzhen Municipal Housing System Reform Office (with Shenzhen Municipal Land Resources and Property Management Bureau and Project Group for Housing Problems of the Urban Temporary Population) 2004, *Main Report for the Project on Housing Problems of the Urban Temporary Residents* (unpublished internal report), Shenzhen: Mimeo.

- Shenzhen Municipal Labour and Social Security Bureau, 2005, *Indicative Salaries for the Shenzhen City Labour Market in 2005*, (unpublished internal report), Shenzhen: Mimeo.
- Solinger, D. J. 1999, *Contesting Citizenship in Urban China, Peasant Migrants, the State and the Logic of the Market*, Berkeley: University of California Press.
- Turner J. C. 1968, 'Housing Priorities, Settlement Patterns and Urban Settlements in Modernising Countries', *Journal of the American Institute of Planners*, Vol. 34 (Nov), pp 354-363.
- Turner J. C. 1976, *Housing by People*, London, Marion Boyers.
- Wang, Y. P. 2000, 'Housing Reform and Its Impacts on the Urban Poor', *Housing Studies*, 15 (6): 845-864.
- Wang, Y. P. 2003, 'Living Conditions of Migrant in Inland Chinese Cities', *The Journal of Comparative Asian Development*. 2 (1): 47-69.
- Wang, Y. P. 2004, *Urban Poverty, Housing and Social Change in China*. London and New York: Routledge.
- Wang, Y. P. and Murie, A. 1999, *Housing Policy and Practice in China*, Hampshire: Macmillan and New York: St Martin's Press, 270 pages +xii.
- Wu, W. 2002, 'Migrant Housing in Urban China: Choices and Constraints', *Urban Affairs Review*, 38: 90-119.
- Wu, W. 2004, 'Sources of migrant housing disadvantage in urban China', *Environment and Planning A*, 36: 1285-1304.
- Wu, W. 2006, 'Migrant Intra-urban Residential Mobility in Urban China', *Housing Studies*, 21(5): 745-765.
- Xu, H. 2001, 'Commuting Town Workers: the case of Qinshan, China', *Habitat International*, 25 (1): 35-47.
- Yang, X. 2000, 'Determinants of migration intentions in Hubei province, China: individual versus family migration', *Environment and Planning A*, 32(5): 769-787.
- Zhu, Y. 2007, 'China's floating population and their settlement intension in the cities: Beyond the Hukou reform', *Habitat International*, 31: 65-76.



**Through the Eyes of the “Strangers”: Residential Satisfaction of Temporary Migrants in *Chengzhongcun* (Village in the City) in Guangzhou**

**Yat-ming SIU**

*Department of Sociology, Hong Kong Baptist University, Kowloon*

**Abstract**

The number of temporary migrants, or floating population, living in Guangzhou is more than 3 million. Most of them are living in *chengzhongcun* which literally means village in the city. These temporary migrants are “strangers”, in Gerog Simmel’s sense, who come today and may stay tomorrow. Because of their bipolar characteristics of both nearness and remoteness, strangers can provide an objective evaluation of the group environment. Drawing from a survey of 12 villages in Guangzhou City, this study compares the temporary migrants’ and local residents’ perception of the physical and social aspects of the community in which they live.

## **Community Development in Villages-in-the-City: The Experience of Guangzhou City**

**Him CHUNG**

*Department of Geography, Hong Kong Baptist University, Kowloon Tong, Hong Kong*

### **Abstract**

In China, the emergency of new urban space as a result of economic reform has generated a community building process. While many attentions have been put on the changes of existing urban neighbourhoods, community development in newly urbanized settlements has been insufficiently discussed. In Guangzhou, these newly urbanized areas are existed in the form of 'villages-in-the-city'. The peasant root of these settlements has cultivated a very special way of community development after they have been included in the street office and neighbourhood committee framework. Central to this model is a persistence of 'self-reliance ideology' and 'collective ownership' of properties. Based on the information obtained from a 'villages-in-the-city' in Guangzhou city, this paper attempts to investigate this new form of community development.

## Residential Mobility and Housing Preferences

## **Residential Mobility and Suburbanization in Beijing**

**John R. LOGAN, Limei LI**

*Spatial Structures in the Social Sciences, Department of Sociology, Brown University,  
Providence, RI, USA*

### **Abstract**

It is well known that the populations of major Chinese cities have tended to decentralize in the last decade, and Beijing is an example of this trend. Using survey data collected in 2006, we evaluate the following questions. First, what are the determinants of residential mobility, and in particular of movement from inner city to suburban districts of Beijing? Second, what are the consequences in terms of housing and community characteristics of making such moves? Initial analyses suggest that the market-based models applied to suburbanization in the United States -- where mobility is dependent on family resources and preferences -- do not apply well in Beijing. Rather, mobility appears to result from institutional processes that constrain individual choices.

# Displaced Residents, Housing Conditions and Residential Satisfaction: An Analysis of Shanghai Residents

Si-ming LI<sup>1</sup>, Yu-ling SONG<sup>2</sup>

1. Department of Geography, Hong Kong Baptist University  
Kowloon, Hong Kong  
Email: lisiming@hkbu.edu.hk

2. Department of Geography, Changhua University of Education  
Changhua, Taiwan  
Email: yulingsong@yahoo.com

## Abstract

Chinese cities are undergoing massive transformation. One after another, inner city neighbourhoods of pre-1949 origin and work-unit compounds built in the socialist period have been torn apart, giving way to glossy office towers and luxurious condominiums. Millions of people have been uprooted and forced to be relocated. The mass media and research based on case studies generally convey a message of widespread grievance among the displaced residents. Based on a survey of 1200 households conducted in Shanghai in 2006, the present study provides a systematic account of the profiles of the displacement residents, juxtaposed against other residents of the city. The major conclusion is that irrespective of all the criticisms concerning unregulated demolitions and forced evictions, the housing conditions of the displaced residents are somewhat better off than other Shanghai residents, both objectively and in terms of subjective evaluations.

**Keywords:** displaced residents, community satisfaction, community relationship, Shanghai

## 1. Introduction

China is an ancient country. The history of cities like Beijing, Xian and Guangzhou can be dated back to Qin Dynasty more than two thousand years ago. Even cities such as Shanghai and Tianjin, which assumed their pre-eminence as treaty ports in the Late Imperial and Republic periods, are several hundred years old. Yet, rather than showing admiration of its ancient past, a first-time traveller to China today would most likely be overwhelmed by the newness and glamour of the country's urban built environment. In almost every city s/he goes s/he will come across a sprawling civic square designed according to traditional *fengshui* or geomancy principles and modelled after the Tiananmen Square in Beijing.<sup>4</sup> Overlooking the civic square on the northern end is the newly constructed city hall, an imposing structure mimicking the White House of the United States. On both sides of the square's north-south axis lie the city's main public buildings: the city exhibition centre showcasing the city's accomplishments and visions as an international metropolis, the main library, the opera house, and the city youth palace. The civic square, of course, is the heart of the city, the focal point of

---

<sup>4</sup> The discussion here is written with special reference to the city of Shenzhen (Cartier, 2002). But cities across the country, such as Guangzhou, Dongguan and Qingdao, have similar civic squares and CBD development plans.

radial landscaped boulevards and metro lines. It also constitutes a significant part of the city's new or reconstructed central business district (CBD), which is characterized by an immense congregation of brand new office, hotel and condominium towers as well as construction cranes. The newness and glamour of once dilapidated and dull Chinese cities go beyond the CBD and signify urban redevelopment of unprecedented scale. One after another, complete urban neighbourhoods of pre-1949 origin and work-unit compounds built in the socialist era have been torn down, giving way to luxurious housing estates, glossy office towers, expansive metro stations that form the foundation of enormous commercial-cum-residential complexes, elevated radial highways and ring roads, and waterfront promenades (Wu, 2001; 2004). For almost two decades cities all over China have been incessant huge construction sites. In a relatively short period of time China's major cities have experienced major facelifts, and are now assuming a highly modern and vibrant outlook. At the same time tens of millions of families have been uprooted and relocated to places not necessarily according to their desire.

A number of authors have examined China's phenomenal urban transformation – indeed urban revolution (see, for example, Li, 2005; Ma and Wu, 2005; Wu, forthcoming). Explanations are generally sought through the systemic reforms that began in the late 1970s and early 1980s and that have fundamentally restructured China's economy, if not so much its polity. From the outset the reforms were meant to re-integrate China into the world economy, deliberately subjecting China to the forces of economic globalization. An integral part of this strategy was to devolve financial autonomy and decision-making powers to local authorities and state-owned enterprises (SOEs). The intention was to encourage local governments to formulate economic development plans that were more tuned to local circumstances and geared to local needs, and to reduce the rigidities inherent in the former centrally planned economy which often resulted in serious misallocation of resources in the production sphere. Local governments have since assumed much greater importance not only in charting local economic growth but, in aggregate, also in bringing about an incredibly high rate of fix asset formation and in shaping the structure of the nation's space economy. Under the reforms, local governments compete fiercely with each other for resources of all kinds, particularly the right to formulate place-specific policies to entice domestic and foreign investments, so as to promote industrial development and economic growth. Gradually local governments have assumed the role as mentors of the SOEs and other economic units located within their jurisdictions, and made strenuous attempts to secure financial capital, labour, raw materials and other resources for the enterprises and protect them from taxation and regulatory demands from upper-level authorities and from competition from enterprises outside of their domains. A local growth coalition comprising the local government and the productive enterprises in the locality has emerged (Zhu, 1999). Competition between localities is intense, and the practice of local protectionism is pervasive. Various Chinese scholars term the emerging space economy “*zhuhou* or dukedom economy”, while scholars in the West have coined the terms “local state corporatism” and “local developmental state” to denote the local growth coalition (Li, 2005; Oi, 1992).

Initially the local growth coalition was mainly concerned with promoting industrial growth. But the introduction of the system of paid transfer of land use rights in 1988 has, to a significant extent, re-oriented the focus of the coalition to urban land development and helped transform the local polity to one resembling the “growth

machines” and “urban regimes” of the United States in which the interests of local government and local business groups, especially landed capital, intertwine (Logan and Molotch, 1987; Stone, 1993; He and Wu, 2005; Zhang and Fang, 2004; Zhu, 2005). Previously in the socialist era land, more specifically urban land, as a major means of production was taken away from the sphere of circulation. Most landed properties were nationalized in the 1950s, and the remaining came under the control of the municipal housing bureau in the turmoil of the Cultural Revolution of 1966-1976 (Huang and Clark, 2002). Land, especially raw or un-serviced land on the urban fringe, was administratively allocated according to “needs” often in conjunction with the five-year economic plan and the annual budgetary exercise to individual work units, which included SOEs and state and quasi-state organizations, (Tang, 1994). In spatial terms cities in socialist China typically comprised a pre-1949 core, surrounded by a ring of work-unit compounds, where people lived and worked in the same place, and workers villages (Lo, 1987). The latter were residential estates built for those work units which did not have the land or the financial means to construct housing for their workers.

The new system of paid transfer of land use right involves first the separation of the right of usage from the right of ownership and then the transfer the usage right from the state to the user upon payment of a fee. Subsequently the usage right can be freely transacted in the market. As such the reform has re-commodified urban land and given rise to an urban land rent gradient (Yeh and Wu, 1996). And, given the fact that land was formerly allocated to work units free of charge, the re-emergence of the urban land rent gradient implies the existence of immense rent gaps to be realized (Smith, 1979; Zhu, 2005). Both the municipal government and SOEs and other work units have been eager to capitalize on and redevelop the land under their control. The municipal government, in particular, represents the state in the disposal of land use rights and the collection of land sales proceeds. Urban redevelopment through which highly valuable inner-city land parcels assembled by municipal governments are sold for the development of luxurious commercial and residential projects is an exceedingly profitable endeavour and is a major means through which municipal governments finance expensive urban infrastructure developments and image-building projects. Not surprisingly municipal governments often colluded with real estate developers, many of which were established by the municipal governments and remained closely tied to the latter upon subsequent privatization, to launch large-scale redevelopment programmes. Examples include the “Old and Dilapidated Housing Redevelopment Programme” of Beijing (Fang and Zhang, 2003) and the “365 Plan” of Shanghai, which aimed at redeveloping 365 hectares of old and dilapidated urban areas (He and Wu, 2007). In 1994, a major taxation reform was introduced to re-affirm the centre’s control over national finance. The loss of taxation revenues exerted further pressure on municipal governments to rely on land sales revenues (Wong, 1997).

Earlier in 1993 the Chinese government pronounced to establish a socialist market economy and launched a pervasive enterprise reform. The objective was to transform SOEs to true business undertakings rather than extensions of the state. Profit became the overriding concern. Yet, SOEs were still burdened with social obligations such as health care and housing provision. Also, SOEs were generally inefficient producers and ineffective sales promoters. Under an increasingly marketized environment many SOEs had difficulty to compete and were on the brink of bankruptcy. Even those that were more financially viable were under tremendous pressure to seek additional incomes. Redeveloping in part or in whole the work-unit compound was an attractive

option (Zhu, 2005). In theory the land they occupied remained state property and a fee equal to its market value had to be paid to the municipal government before the land was conferred transferable right. In practice large SOEs had the backing of the respective ministries at the centre and were in a strong position in their negotiation with the municipal government in arriving at a land price far below market value and in launching real estate development projects that paid little regard to the city's master development plan. The municipal government, on its part, was enthusiastic to modernize the city's landscape and to aspire for the international metropolis status. It too would like to encourage the SOEs to move out of the inner locations and redevelop their compounds.

Clearly the scale of redevelopment has been enormous, so has been the size of urban population uprooted. According to the World Bank (1993), 8.5 million urban households were relocated in the 1980s. The pace of redevelopment accelerated in the 1990s. In Shanghai, for example, a total of 302,000 households were evicted during the 8th Five-year Plan period (1991-1995), 2.5 times the cumulative number of evictions recorded over the previous 12 years (Gu and Liu, 1997; Zhang, 1998). During the 9th Five-year Plan (1996-2000), for the country as a whole some 330 million square metres of housing were demolished. In Shanghai, between Jan 1996 and July 2005 a total of 672,893 households were evicted, averaging 70,831 households per year. The great majority of housing demolished was the traditional *lilong* or lane housing, but simple structures were also a main target of redevelopment. According to data given by the Shanghai Ministry of Construction (2005), between July 1991 and August 2005 a total of 656,029 *lilong* households were relocated; the number of affected households who previously lived in simple structures stood at 196,994.

In the Chinese language literature research on urban redevelopment to date tends to emphasize demolition as a way of fostering urban growth (Yang, 1994; Chen, 1997; Yuan, 1998; Dai, 1999; Yao and Zhao, 2000). Efforts have also been made to examine demolition control and investigate what constitute a proper relocation policy (Gu and Liu, 1997; Li, 1997; Lu, 1997; Zhang, 1998; Zhao & Zhao, 1998). Recent studies give a greater concern on the preservation of historical neighbourhoods (Fang, 2001; Abramson, 1998) and on the adaptation of relocated households to the new place after eviction (Ye, 2003; Wang, 2003; Qiu, 2002; Wang, 2000). However, in the English language literature scholars have only begun to examine the different facets of urban redevelopment in China. Above, we reviewed studies analysing the political-economic context under which phenomenal urban restructuring has taken place, which have been the focus of scholastic concerns. On the urban redevelopment programmes *per se*, comparisons have been made with the United States Federal Urban Renewal Program of the 1950s and 1960s (Zhang and Fang, 2004), and the property-led urban redevelopment programme of the United Kingdom in the 1980s (He and Wu, 2005). There have also been studies on the socio-physical impacts of the development projects at the urban neighbourhood level (Fang, 2006; He and Wu, 2005; 2007).

Arguably, the residents displaced by the redevelopment programmes are people that are most affected. In an authoritarian local development state the displaced residents are rather powerless when confronting the main agents of urban redevelopment, the local government and the developers, and are in a highly disadvantageous position defending their rights. As such residential displacement would likely cause distress and dissatisfaction, and bring about social malaise. Yet, none of English language studies



cited specifically studied the displaced residents. Fang (2006), for example, surveyed only redeveloped communities with contained returned original residents, but in all save one of the communities studied returned residents comprised only a small proportion of the population. Wu's (2004) study of residential relocation in Shanghai is perhaps an exception. Based on a sample of some 500 individuals Wu compared the socio-economic compositions and the satisfaction levels of people relocated by a variety of reasons: displacement by infrastructure development, by real estate construction projects, and by active choice. While proportionately more people of the former two categories considered the move very unsatisfactory, in the main the displaced residents were still quite happy about the result. The Wu (2004) study only reported an overall satisfaction score without analysing its constituent components. Also, the sample is not a spatially random or representative one; a large part of it was from neighbourhoods with perceived high incidence of relocated households. This precluded Wu from conducting meaningful spatial analysis of the relocation process.

Building upon Wu's (2004) work, the present paper attempts to depict a more detailed picture of the displaced residents: who they are and how they differ from other people of the city; where they lived prior to relocation and where they live now; to what extent the relocation has improved or worsened their housing lot; and whether or not they are satisfied with their current residence. The data are from a large-scale household survey conducted in the city of Shanghai in 2006. Below we first describe the 2006 Shanghai survey. We then present the survey findings. The major conclusions, which largely echo the findings of Wu (2004), are that regardless of all the criticisms laid against unregulated demolitions and forced evictions, with respect to housing consumption the displaced residents on average are better off than most other types of Shanghai residents, especially those who have not moved. Moreover, as a result the displaced residents generally exhibited comparatively higher levels of residential satisfaction.

## **2. The 2006 Shanghai Survey**

Shanghai is the largest city in China, with a total population of 17.42 million (Liu et al, 2007, p. 204). Administratively, the city is divided into 16 urban districts. Shanghai's old central business district (CBD), the Bund, is located on the western shore of the Huangpu River in Huangpu District. The city's inner core, bounded roughly by the Inner Ring Road, also covers the Districts of Luwan and Jing'an and part of Xuhui, Changning, Putuo, Zhaibei and Hongkou Districts. The focus of development in recent years is the vast Pudong District located across the Huangpu. Lujiazui at the western end of Pudong District, with its iconic skyscrapers, is the new CBD of Shanghai. The area between the Inner Ring and Outer Ring Road, which includes the rest of Xuhui, Changning, Putuo, Zhaibei and Hongkou Districts and part of Pudong, Baoshan, Jiading and Minhang Districts, are the inner suburbs, where major real estate developments have taken place since the 1990s. Together the central core and the inner suburbs cover a total area of about 600 km<sup>2</sup> and a population of 9.94 million (Zhu, 2006). Beyond the Outer Ring Road lie Shanghai's outer suburbs, which comprise the rest of Baoshan, Jiading and Minhang Districts and the Districts of Songjiang, Jinshan and Qingpu. (See Figure 1)

The 2006 Shanghai survey was carried out with the assistance of the Institute of Sociology of the Shanghai Academy of Social Sciences, which had substantial experience in undertaking large-scale household surveys. Jiading, Songjiang, Jinshan

and Qingpu were until quite recently rural counties and were excluded from the survey. Also, for practical reasons only the areas within and bordering the Outer Ring Road were surveyed. Therefore, the survey only covered the inner core and inner suburbs. For simplicity we denote the former “central city” and the latter “suburbs”. A total of 1200 households were interviewed. In selecting the respondents a multi-level probability proportional to size sampling strategy was adopted. In each urban district the number of households chosen was proportional to the total number of households in the district as given by the book of household registration. This determined how many sub-districts or *jiedaos* in a given district were to be chosen. The idea was to have each chosen sub-district to contain a cluster of 25 respondents. The actual choice of sub-districts was made on a systematic basis (with the first sub-district randomly selected). A residents committee or *juweihui* would constitute a respondents cluster. In each chosen sub-district a residents committee was selected on a randomized basis. Finally, in a chosen residents committee the interviewer was asked to successfully interview 25 households, which were randomly chosen. Such a sampling design ensures that the spatial distribution of the sample approximates that of the population.

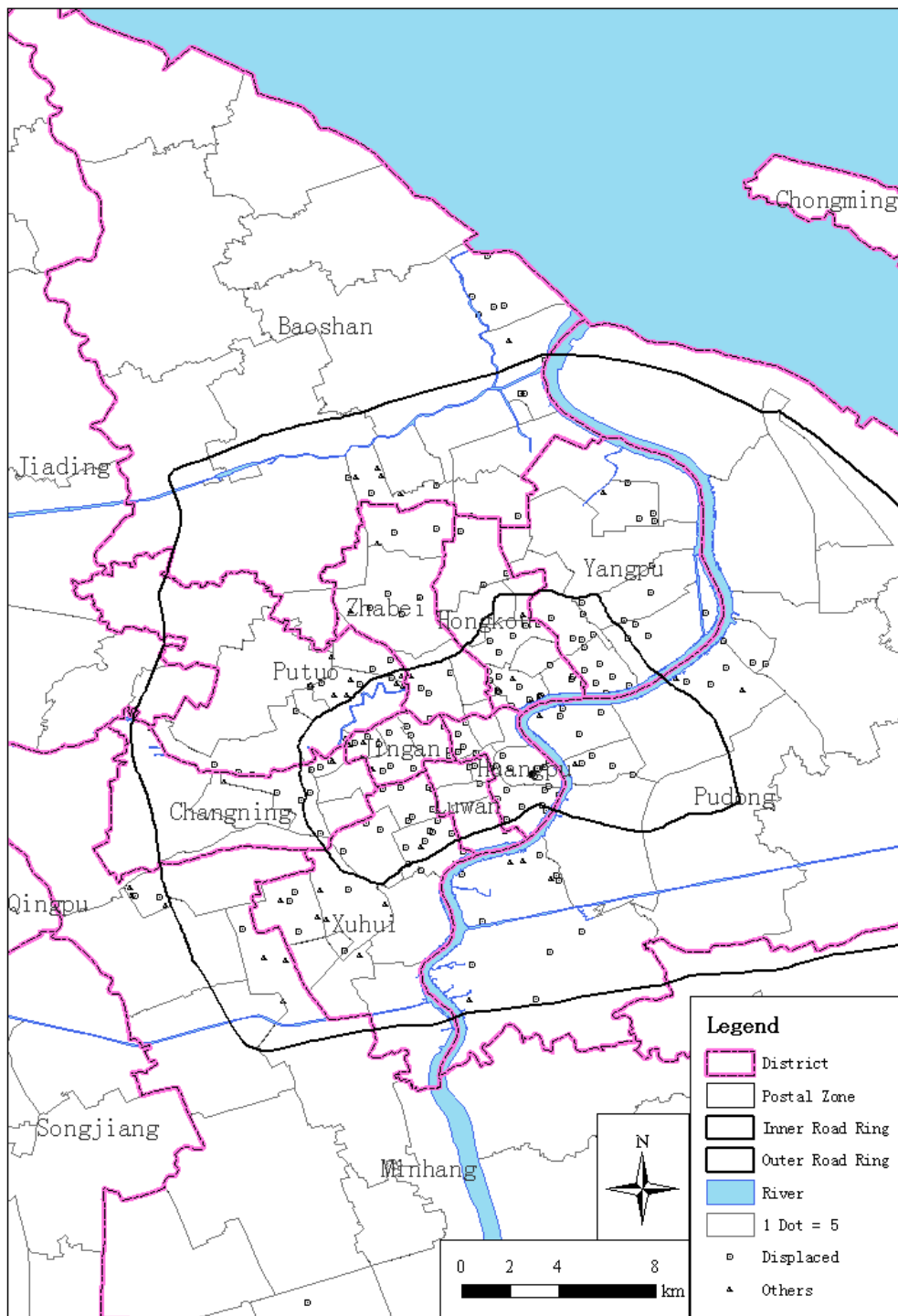


Figure 1. Distribution of Displaced and Other Residents of Shanghai  
 Source: Survey Data

The questionnaire employed covers a wide range of questions: personal and household characteristics, work unit affiliation and employment history, dwelling characteristics and neighbourhood conditions, location of current and previous residence, date of move-in and move-out, reasons for moving to the current residence, satisfaction of the current and previous residence, and relationship with neighbours. The interview was targeted at the head of household. Each respondent thus represents one household. For most purposes in the discussion below “residents” and “households” can be used

interchangeably. The newly built commodity housing estates in Shanghai are mostly heavily guarded gated communities. It is very difficult to enter and conduct household interviews in such housing estates. Because of this residents living in the new commodity housing estates are likely to be under-sampled. In other words, the survey would disproportionately include households residing in the traditional *lilong* or lane housing. Thus, 45.0% of the dwellings in the sample were constructed prior to 1980, and commodity housing accounts for only 13.4% of the sample housing stock. There is a corresponding bias towards older households. The mean age of the respondents stands at 52.5 years; moreover, retirees constitute 45.6% of the sample. It may be pointed out that a recent study of three inner-city neighbourhoods of Shanghai reports even higher mean ages (Li and Wu, 2006).

In the analysis below the displaced residents are compared with other population groups, defined according to migratory status. Arguably, older households would encounter greater difficulties in adjusting to a new environment upon relocation and would be more likely to exhibit dissatisfaction, especially if the relocation is a forced one. If, between the different migratory groups, the displaced residents are comparatively more dissatisfied, then the somewhat higher concentration of older households in the sample is likely to intensify the difference in the satisfaction level revealed between the displaced residents and other migratory groups. If, however, the displaced residents have comparative higher levels of satisfaction, then the difference between groups will somehow be concealed.

### **3. The Shanghai Displaced Residents**

#### *Extent of Residential Displacement*

The respondents were asked to report on residential history. All moves since 1980 were recorded. For the present purpose those who chose “demolition of the original residence” as the reason for relocation to the current residence are defined as displaced residents. Out of a total sample of 1200, 253 or 21.1% chose this answer. Note that the sample contains altogether 768 intra-urban movers. In other words, 32.9% of all intra-urban moves were due to residential displacement. As the above counts are based only on the most recent move and did not include those displaced residents who had undertaken moves on their own choice after the displacement, the extent of residential displacement in Shanghai is probably somewhat larger than what was indicated above. With respect to the timing of displacement, the data show that 38.4% of the displacement occurred before 1992, suggesting that redevelopment in Shanghai was already quite common in the early reform period. But there was an obvious concentration of displacement activities (47.5%) over the period 1992 to 1999; when both the municipal and district government and the SOEs were eager to capitalize on and redevelop the land under their control upon implementation of the system of paid transfer of land use right (Zhu, 2005). In fact residential relocation due to demolition accounted for 47.8% of all intra-urban moves in this period. From 2000 onwards, the pace of displacement appears to have declined somewhat, although there has been a general increase in residential mobility in the city: only 14.2% of the displacements in the sample took place in or after 2000. It may be noted that quite a large proportion of other types of intra-urban moves in the sample (35.7%) occurred in the most recent period, and that the under-representation of new commodity housing estates likely implies an under-estimation of voluntary residential mobility.

#### *Spatial Distribution of Replacement Housing*

As expected, the bulk of redevelopment activities (77.8%) took place in the central city. However, the majority of the displaced households (73.5%) were relocated to the suburbs. Relatively few (26.5%) of the displaced households could be able to maintain central city residence. In comparison, 45.7% of voluntary moves ended up in central city locations. The difference in the destination location between the displaced and non-displaced movers was most acute in the 1980s, even though the policy at that time emphasized in situ resettlement (He and Wu, 2007). In more recent years both groups were inclined to take up suburban residences. A closer examination of the data reveals that the displaced residents tend to concentrate in areas just outside the Inner Ring Road in the districts of Zhaibei, Putuo and Xuhui. But the sample also contains a major pocket of displaced residents in Mihang District just outside the Outer Ring Road (Figure 1). Quite unexpectedly, very few of them were relocated to Pudong, even though Pudong has been the focus of urban development since the early 1990s. Data on the source of housing provision show that the municipal housing bureau has played an active part in the relocation: 57.4% the displaced residents bought “reform housing” or housing sold at heavily discounted prices from the municipal housing bureau. Compensation housing offered by the developers constitutes another major source of supply, accounting for 30.7% of the displaced residents sample (Table 1). Both types of compensation housing are concentrated in selected *jiedaos* or sub-districts of the city, although compensation housing provided by the municipal housing bureau appears to be somewhat more scattered than that offered by the developers.

Table 1. Source of Housing Supply (%)

Source of Housing Supply	Entire sample	Displaced residents	Others	Of Which		
				IM	OM	Stayers
Developers	8.2	4.0	9.7	13.8	0.0	0.0
Municipal Housing Bureau	46.1	57.4	42.1	41.4	57.1	41.2
Work Unit	12.8	1.7	16.7	18.4	7.1	13.7
Private Owner	12	4.5	14.7	19.3	28.6	0.8
Developer (Resettlement Housing)	8.9	30.7	1.2	1.7	0.0	0.0
Inherited or Gift	9.5	1.1	12.5	4.0	7.1	35.9
Self-built	2.2	0.6	2.8	0.9	0.0	8.4
Others	0.3		0.4	0.6	0.0	0.0

Note: IM: Intra-urban migrants; OM: Migrants from outside of Shanghai.

Source: Survey Data

#### *Socio-demographic Profiles: Displaced Residents Vs Other Migratory Groups*

In this part of the analysis the socio-demographic profiles of the displaced residents in Shanghai are examined, juxtaposed against other migratory status, namely, other or voluntary intra-urban migrants, migrants from outside of Shanghai, and the stayers or people who have not experienced any residential moves since 1980. The results are given in (Table 2). By design, the sample under-represents people without the proper Shanghai *hukou* or household registration. Still, 9.4% of all respondents in the sample do not hold Shanghai *hukou*. Similar to the *stayers* (98.5%), almost all the displacement residents (98.4%) are Shanghai *hukou* holders. This is to be expected, as only people with the Shanghai *hukou* status would be offered resettlement housing or equivalent cash compensation. The displaced residents on average are even older than the sample as a whole: the mean age for the displaced residents is 55.3 years, and for other residents is 51.8 years. But it is the stayers who constitute the oldest group, with

a mean age of 58.0 years. Percentage-wise more of the displaced residents are retirees (51.0%) than other respondents (44.4%). Also, the displaced residents are more inclined to take up manual and other unskilled works (48.2% Vs 43.2%), and working in state-owned industrial enterprises (63.1% Vs 57.2%). Consistent with the employment profiles, the mean household income of the displaced group (RMB31556) is 11% lower than that of other residents (RMB 35495). Also, the displaced residents are slightly less educated: 51.0% has had junior secondary schooling or less; the corresponding figure for other residents is 45.7%. On the whole, the displaced residents occupy comparatively lower positions on the socio-economic ladder. But the differences between groups are not generally large; moreover, it is the stayers rather than the displaced residents who are the least well off.

Table 2. Socio-demographic profile and current residence condition

	Entire sample	Displaced residents	Others	Of which		
				IM	OM	Stayers
<i>Socio-demographic profile (Mean)</i>						
Age	52.5	55.3	51.8	50.7	36.2	58.0
Sex (1=male)	0.54	0.51	0.54	0.56	0.54	0.52
Education	4.63	4.42	4.69	4.95	4.56	4.31
Average annual household income (RMB)	34664	31556	35495	40036	28053	30627
Gross floor area	45.8	48.4	45.1	52.9	30.3	37.2
<i>Education attainment (%)</i>						
Junior secondary or less	46.8	51.0	45.7	36.3	64.8	54.9
Senior secondary	33.4	34.4	33.2	35.1	14.3	35.2
College or higher	19.8	14.6	21.1	28.5	20.9	9.9
<i>Household registration (Hukou) status (%)</i>						
Shanghai city hukou	90.6	98.4	88.5	93.2	24.2	98.5
Shanghai rural hukou	0.4	0.0	0.5	1.0	0.0	0.0
Non-native with temporary resident license	8.2	1.6	9.9	5.4	67.0	1.5
Non-native without temporary resident license	0.8	0.0	1.1	0.4	8.8	0.0
<i>Work unit type (%)</i>						
State-owned enterprise	57.2	63.1	55.7	53.0	21.8	68.7
Party, government, or quasi-government institution	12.7	13.3	12.5	13.8	5.7	12.5
Others	30.1	23.7	31.8	33.2	72.4	18.8

Table 2. continues

	Entire sample	Displaced residents	Others	Of which		
				IM	OM	Stayers
<i>Occupation (%)</i>						
Low skilled	43.2	48.2	41.9	35.6	48.8	49.8
Self-employed	4.0	2.4	4.4	3.5	17.4	2.4
Skilled workers and general clerks	31.5	34.1	30.8	32.2	19.8	31.6
Medium-to-high ranked managerial	7.3	5.2	7.9	11.0	4.7	4.0
Low-ranked managerial	8.2	6.8	8.5	9.8	7.0	7.0
Professional	5.7	3.2	6.4	7.9	2.3	5.2
<i>Year of construction (%)</i>						
Before 1949	24.9	3.2	30.8	17.1	31.7	51.9
1950s	10.5	2.4	12.7	5.2	7.3	25.6
1960s	3.5	1.6	4.0	1.0	17.1	5.3
1970s	8.3	11.3	7.5	4.8	7.3	11.6
1980s	30.9	44.5	27.2	41.9	24.4	5.0
1990s	19.7	35.2	15.5	25.6	12.2	0.6
2000s	2.2	1.6	2.3	4.2	0.0	0.0
<b>Number of cases</b>	1200	253	947	515	91	335



*Housing conditions: Displaced Residents Vs Other Migratory Groups*

Previous studies have demonstrated a strong residential preference for central locations in urban China (Wang and Li, 2004; 2006). In this sense the displaced residents are under-privileged, as they were forced to move to undesirable suburban locations. But with respect to other measures of housing consumption the displaced residents compare fairly well with other residents of Shanghai, especially with those who have never moved. First, the displaced residents have a much higher rate of homeownership: 69.6% against 52.4% for other Shanghai residents and 39.1% for the stayers. Second, apartment living constitutes 97.5% of the displaced residents sub-sample and make-shift housing accounts for only 2.4%. For other Shanghai residents the corresponding figures are 90.6% and 7.3%, respectively; for the stayers they are 85.1% and 12.5%. Third, the displaced residents generally reside in newer housing: 36.8% live in housing built after 1990, against 17.8% for other residents.

Moreover, on average the dwellings of the displaced residents are larger in terms of floor area (48.4 m<sup>2</sup> Vs 45.1 m<sup>2</sup> for other residents) and number of bedrooms (1.85 rooms Vs 1.69 rooms). They are also better equipped: 95% have their own kitchen and 95% have their own toilet. In contrast only 70% of the dwellings of other Shanghai residents have their own kitchen and 64% have their own toilet. Again, it is the stayers who have to endure the worst housing conditions. Their dwelling size averages only 37.2 m<sup>2</sup>, and only 55% and 42% are equipped with kitchen and toilet, respectively. With respect to housing management, estate management by professional management firms account for 70.0% of the displaced residents sub-sample; however, professional management only covers 50.8% of the rest of the sample. (See Table 3)

The picture depicted above is somewhat different from that given by most accounts in the literature, which generally describe the displaced residents as an underprivileged and oppressed group. The 2006 Shanghai survey results suggest that to many households in the city who have long suffered from extreme crowdedness and dilapidated housing conditions and who are effectively barred from the commodity housing market because of the high price, urban redevelopment and hence displacement due to demolition is perhaps an opportunity for the ordinary households to substantially improve their housing lot. In comparison with the stayers who have not been given this opportunity, the displaced residents on average enjoy quite descent housing. Among all migratory groups identified, only the voluntary movers have better housing conditions than do the displaced residents.

Table 3. Housing conditions

Item	Entire sample	Displaced residents	Others	Of which		
				IM	OM	Stayers
<i>Building attributes (Mean)</i>						
Number of floors	5.44	6.16	5.25	6.80	3.87	3.23
Gross floor area (sq m)	45.8	48.42	45.1	52.9	30.33	37.24
Number of bedrooms	1.73	1.85	1.69	1.74	1.41	1.70
Presence of balcony (Yes = 1)	0.64	0.85	0.59	0.76	0.44	0.37
Availability of private kitchen (Yes = 1)	0.75	0.95	0.7	0.83	0.49	0.55
Availability of private toilet (Yes = 1)	0.71	0.95	0.64	0.81	0.51	0.42
<i>Building/Estate managed by (%)</i>						

Work unit	0.3	0.0	0.4	0.4	0.0	0.6
Municipal housing bureau	29.9	23.3	31.7	21.6	29.7	47.8
Property management company	54.9	70.0	50.8	63.7	40.7	33.7
Self managed	8.3	0.8	10.3	4.1	24.2	16.1
<i>Jiedao or juweihui</i>	6.6	5.9	6.8	10.3	5.5	1.8
<i>Owned or not (Yes = 1)</i>	0.56	0.7	0.52	0.68	0.15	0.39

#### 4. Residential Satisfaction

##### *Overview*

Forced migration implies that the current residence of the displaced residents, as a rule, is not the one of their choice. As such, other things being equal, the displaced residents should be less satisfied with their current residence than other residents. In the survey the respondents were asked to indicate, on a five-point scale (1 being the most satisfied and 5 being the most unsatisfied), their evaluations of different aspects of dwelling and neighbourhood satisfaction, such as floor space, internal design of the dwelling, construction quality, landscaping, estate management and public security. Table 4 provides a summary of the evaluations, classified according to the migratory status of the respondents.

In most aspects both the displaced and other residents are somewhat neutral in their assessment of residential satisfaction. However, contrasting the general impression, the displaced residents are slightly more satisfied with their residential conditions than are other residents, especially in regard to those attributes describing the conditions of the dwelling. Consistent with the general better building conditions they enjoy, the displaced residents, on average, give significantly lower scores (i.e., more satisfied) on such items as “water, electricity and water supply”, “lighting and ventilation”, “provision of cable TV”, and “fire prevention and other safety facilities”. In fact the mean scores on these items given by the displaced residents are even lower (more satisfied) than those given by the voluntary movers. Regarding the overall dwelling satisfaction level, the mean score of the displaced residents (2.81) is only slightly higher (less satisfied) than that of the voluntary movers (2.78) but significantly lower (more satisfied) than that of the stayers (3.21). In fact the level of residential satisfaction experienced by the latter is even lower than that of migrants from outside of Shanghai.

Table 4. Residential Satisfaction

	Entire sample	Displaced residents	Others	For others		
				IM	OM	Stayers
<i>Assessment of Dwelling (Mean)</i>						
1. Dwelling size	2.99	2.95	3.00	2.85	3.15	3.20
2. Interior design	3.03	2.99	3.04	2.85	3.24	3.28
3. Public utilities (water, electric and gas supply)	2.75	2.54	2.81	2.58	3.22	3.06
4. Broad band network	4.02	3.86	4.06	3.83	4.21	4.37
5. Lighting and ventilation	2.88	2.64	2.94	2.76	3.16	3.15

	Entire sample	Displaced residents	Others	For others		
				IM	OM	Stayers
6. Hygiene and maintenance of public space	2.95	2.69	3.02	2.81	3.19	3.29
7. Building quality	3.00	2.89	3.03	2.82	3.22	3.31
8. Privacy	2.94	2.8	2.98	2.77	3.09	3.28
9. Noise	3.00	2.88	3.04	2.85	3.04	3.31
10. Fire and other safety facilities	3.14	2.89	3.21	3.01	3.25	3.50
Overall evaluation of the dwelling	2.93	2.81	2.97	2.78	3.11	3.21
<i>Assessment of Neighbourhood (Mean)</i>						
1. Leisure and sports facilities	3.47	3.40	3.49	3.37	3.56	3.66
2. Landscaping	3.19	3.00	3.24	2.96	3.38	3.63
3. Hygienic conditions of neighbourhood	2.96	2.77	3.01	2.77	3.08	3.37
4. Neighbourhood safety	2.96	2.81	3.00	2.82	3.18	3.23
5. Estate management	2.96	2.81	2.99	2.86	3.22	3.14
6. Clinics	2.68	2.75	2.66	2.77	2.85	2.45
7. Education facilities	2.92	2.99	2.9	3.00	3.18	2.70
8. Shopping and other daily facilities	2.43	2.42	2.43	2.44	2.58	2.37
9. Public transport	2.41	2.45	2.4	2.41	2.55	2.35
10. Shuttle bus provision	4.27	4.59	4.18	4.14	4.27	4.23
11. Car parks	4.11	4.40	4.03	3.81	4.23	4.33
Overall evaluation of the neighbourhood	2.79	2.77	2.80	2.71	2.93	2.90

The difference between the displaced residents and other Shanghai residents is much more mixed with regard to neighbourhood assessment. In some items, such as landscaping, estate management and public security, the levels of satisfaction displayed by the displaced residents are quite similar to those given by the voluntary intra-urban migrants, and are significantly higher than other resident groups. Again, the stayers are the least satisfied. But for other items, particularly those pertaining to accessibility to communal facilities including accessibility to “clinic and hospital” and “education facilities”, the displaced residents are slightly less satisfied than other groups. This reflects the fact that the great majority of them were relocated to less desirable suburban locations. As a corollary, the stayers who tend to occupy central locations are the most satisfied on these items. Balancing out, the overall assessments of neighbourhood satisfaction of the displaced and non-displaced residents are almost identical. Both are slightly inclined towards being satisfied.

#### *Factors affecting residential satisfaction*

Previous works suggest that residential preferences are structured by a host of socio-demographic variables which determine a person’s life experience and world view, such as age, sex, marital status and education attainment (Michelson, 1977). Income is also important. In the standard economic model of urban spatial structure, income defines the budget constraint and hence determines the utility or satisfaction level attained (Alonso, 1964). Through its effects on commuting cost and hence the budget constraint, location of residence is another major determinant of residential satisfaction. Moreover, a residence is more than a physical structure. It is located

within a given neighbourhood. Residential satisfaction encompasses neighbourhood satisfaction.

The fact that forced migration has not resulted in significantly lower satisfaction levels among the displaced residents, as compared with those of other groups of residents of Shanghai, could arise because of the differences in the socio-demographic compositions of the two groups, in addition to the differences in the actual levels of housing consumption and residential experiences of the different population groups. To probe further into what cause the slightly higher satisfaction levels observed for the displaced residents, we conduct a series of regression analyses, using the overall dwelling satisfaction level reported as the dependent variable, and variables gauging the socio-demographic characteristics of the respondents and the dwelling conditions and residential location (urban district) as the independent variables. A series of dummy variables indexing the migratory status of the respondent is added to see whether residential displacement *per se* will lead to substantially lower satisfaction. Substantial interaction effects may exist between individual dwelling attributes and residential location, as the older and more dilapidated housing tends to be concentrated in the inner urban core and the newer and better housing is more commonly found in suburban districts. To disentangle the interaction effects a separate regression equation excluding the location dummies is also estimated.

The results are given in columns A (with the location dummies) and B (without the location dummies) of Table 5. Both estimated equations are significant at the .001 level. For the equation with the residential dummies the  $R^2$  obtained is 0.31; for the one without the location dummies it is 0.28. In either case the  $R^2$  is not high, but is quite acceptable for regression models based on micro data. The inclusion of location dummies does not seem to have major effects on the coefficient estimates and the associated levels of significance of the other variables. Thus, the location and other effects are largely additive. As a result in the discussion below we focus on the equation with the location dummies.

Table 5. Regression analysis: Residential satisfaction on Socio-Demographic Factors, Building Attributes, Residential location, and Migratory status

Explanatory variables	(A) $R^2 = 0.28$	(B) $R^2 = 0.31$	(C) $R^2 = 0.47$
Constant	3.576	3.275	3.121
Sex (Male = 1)	.031	.043	.082*
Age	-.001	-.001	.000
Marital status (Married = 1)	.002	.042	-.001
Household income (in RMB 1000)	.000	-.001	.001
Education attainment (Junior secondary or less = 0)			
Senior secondary	-.063	-.031	-.049
College or above	-.021	.001	-.017
Years since moving in	.003	.005*	.001
Whether co-resident with others (Yes = 1)	-.115	-.088	--
Building age (On or before 1949 = 0)			
Built in 1950s	.016	.030	-.002
Built in 1960s	.072	.063	.085

Explanatory variables	(A) R <sup>2</sup> = 0.28	(B) R <sup>2</sup> = 0.31	(C) R <sup>2</sup> = 0.47
Built in 1970s	-.125	-.044	-.315***
Built in 1980s	.046	.069	-.036
Built in 1990s	-.123	-.110	-.150*
Built in 2000s	-.492*	-.612**	-.881***
Building type (Apartment = 1)	-.348**	-.324***	-.394***
Whether in work unit compound (Yes = 1)	-.028	-.119	-.262**
Number of floors	-.015	-.021	--
Whether has lift (Yes = 1)	-.060	.135	-.351***
Single building or within a community	.339***	.396***	.154
Floor area per capita	-.004**	-.004*	--
Number of bedrooms	-.060*	-.063*	--
Whether has balcony (Yes = 1)	-.026	-.029	--
Whether has private kitchen (Yes = 1)	.086	.110	--

Table 5. continues

Explanatory variables	(A) R <sup>2</sup> = 0.28	(B) R <sup>2</sup> = 0.31	(C) R <sup>2</sup> = 0.47
Whether has private toilet (Yes = 1)	-.438***	-.413***	--
Estate management (By municipal housing bureau = 0)			
By property management company	.274***	.224***	.177***
Self-managed	.270*	.245*	.120
By Jiedao / Juweihui	-.142	-.239**	-.478***
Owned or not (Yes = 1)	-.037	-.034	-.058
Presence of recreational facilities (Yes = 1)	--	--	.066
Residential location (Huangpu = 0)	***	--	***
Luwan	-.164		-.247**
Xuhui	-.337***		-.319***
Changning	-.203		-.207*
Jingan	-.251*		-.021
Putuo	.046		-.057
Zhabei	-.286**		-.140
Hongkou	-.404***		-.179*
Yangpu	-.237**		-.181*
Minhang	-.021		.097
Baoshan	.043		.099
Pudong	-.300**		-.147
Migratory status (Stayers = 0)			
Displaced residents	-.025	-.015	.020
Other intra-urban migrants	-.045	-.043	-.017
Migrants from outside of Shanghai	.029	.062	.048

Note:

(A): Regression analysis of dwelling satisfaction with the location dummies;

(B): Regression analysis of dwelling satisfaction without the location dummies;

(C): Regression analysis on neighbourhood satisfaction.

\* significant at .05; \*\* significant at .01; \*\*\* significant at .001

None of the demographic and socio-economic variables is significant. Neither are the migratory group dummies. Evidently, the fact that the overall satisfaction levels of the displaced residents are somewhat higher than other groups is primarily due to the better housing conditions they enjoy. Among the various dwelling attributes, building age (negatively associated with satisfaction levels), being an apartment unit, dwelling in a housing estate, floor area per capita, number of bedrooms, and availability of private toilet (the above four attributes are positively related to housing satisfaction), and housing managed by property management company (associated with less satisfaction than housing managed by the municipal housing bureau) are the most significant variables affecting residential satisfaction. However, building height and housing tenure apparently are not important in the respondents' assessment of residential satisfaction. Quite a few of the location dummies are highly significant. In comparison with residence in Huangpu (the central core of the city), residence in Xuhui and Jingan, both being traditional high-class residential districts, generally is associated with higher satisfaction levels. However, quite surprisingly, the findings also reveal that residents of Zhabei, Hongkou, Yangpu and Pudong Districts, which are more on the outskirts, are more satisfied with their dwelling than those of Huangpu.

The above regression equations pertain only to the satisfaction of the dwelling. A companion regression equation on neighbourhood satisfaction is estimated, the result is given in Column C of Table 5. Other than those variables pertaining directly to neighbourhood conditions such as estate management and dwelling within a residential estate, the list of independent variables in this regression excludes the dwelling attributes but includes the same set of demographic and socio-economic attributes as well as the location dummies. Again the result shows that after controlling for socio-demographic attributes, neighbourhood characteristics and residential location, the difference in neighbourhood satisfaction between the displaced residents and other groups defined by migratory status is small in magnitude and insignificant in statistical terms. The result also shows that higher satisfaction levels are recorded for the traditionally high-status district of Xuhui, followed by Luwan and Changning. While residence in Yangpu and Hongkou is still associated with higher neighbourhood satisfaction than residence in Huangpu, this is no longer the case for residence in Zhabei and Pudong. Clearly, residents of a given city district can give quite different scores on dwelling and neighbourhood satisfaction. The former is mainly tied to dwelling conditions, whereas the latter depends to a certain extent on the historical and hence perceived status of the district of residence.

The above analysis pertains to the overall satisfaction levels. It would be interesting to know which aspects of residential assessment contribute most to the overall scores. To this we perform two regressions, one for dwelling and the other for neighbourhood satisfaction. With respect to dwelling satisfaction, all aspects of dwelling satisfaction examined, save broad band availability, are highly significant statistically. The  $R^2$  obtained stands at 0.68, which is very high for regression based on micro data. This suggests that the survey has exhausted more or less all important aspects in the assessment of dwelling satisfaction. The estimated regression coefficients suggest the following ranking of dwelling aspects in terms of their relative contributions to the overall assessment score (standardized coefficient in parentheses; the number of

asterisks indicates the significance level<sup>5</sup>): fire and other safety features (0.162\*\*\*), building quality (0.162\*\*\*), lighting and ventilation (0.129\*\*\*), noise (0.121\*\*\*), dwelling size (0.114\*\*\*), privacy (0.113\*\*\*), internal design (0.112\*\*\*), hygiene and maintenance of public space (0.105\*\*\*), and provision of public utilities (0.071\*\*). Evidently safety considerations feature highly in the residents' assessment of residential satisfaction.

With respect to neighbourhood satisfaction, the regression equation yields a  $R^2$  of 0.470. While the  $R^2$  obtained is reasonably high for micro-data analysis, the result does suggest that there could be some important aspects of neighbourhood assessment left unexamined. Eight out of the eleven aspects included in the regression equation are significant. In terms of their relative contributions to the overall neighbourhood satisfaction level, the ranking of these aspects is as follows (standardized coefficient in parentheses; the number of asterisks indicates the significance level): estate management (0.211\*\*\*), hygienic conditions of neighbourhood (0.203\*\*\*), shopping and other daily facilities (0.180\*\*\*), neighbourhood safety (0.126\*\*\*), car parks (0.120\*\*\*), clinics (0.108\*\*\*), landscaping (0.105\*\*\*) and leisure and sports facilities (0.072\*\*). The rankings seem reasonable. The more essential items such as hygiene and safety obviously assume greater importance than the less essential ones. Shuttle bus provision is also significant but takes on the "wrong" sign (-0.082\*). The most surprising finding, however, has to do with the two insignificant aspects: education facilities and public transport. Perhaps the respondents tend to have a rather narrow interpretation of what a neighbourhood encompasses.

## 5. Conclusions

It is widely believed that demolitions due to urban redevelopment have uprooted established neighbourhood ties and given rise to widespread dissatisfaction and critical social problems (Zhang, 2004; He and Wu, 2005). According to the State Bureau for Letters and Calls (*Guojia Xinfang Ban*), among all the appeals filed in 2002 and 2003, more than 60% were related to workers' insurance in enterprises, urban displacement, and seizing of land by local officials (Xinhuanet, 2003). The number of complaints related to involuntary relocation increased by 64.86% in 2002 and by a further 47.19% in 2003. In June 2004 the State Council issued a document entitled "Control the Scale of Housing Demolition in Cities and Towns and Strictly Regulate Housing Demolition". The document revealed the predicament of the displacement residents, who have suffered because of blind or ruthless demolitions, inadequate compensation and housing relocation not implemented according to regulations, power abuse by local government, and illegal and unapproved demolitions by development companies (SCPRC, 2004). It appears that widespread dissatisfaction and a high degree of anxiety prevail among displaced residents in China.

In the Shanghai sample studied above close to one-third of all intra-urban moves were residential displacements. The displaced residents on average are somewhat older, less well educated and have slightly less earnings than other groups of residents; however, the differences between groups defined by migratory status are quite small. Apparently, at least in Shanghai, the displaced residents are not the underprivileged and oppressed group generally alluded to in the literature. The survey results also show that the displaced residents enjoy comparatively good housing and are somewhat satisfied with

---

<sup>5</sup> \* = significant at 0.05; \*\* = significant at 0.01; \*\*\* = significant at 0.001.

their residence and neighbourhood. In fact of all groups defined by migratory status the displaced residents are among the most satisfied. It is the stayers or those who have never experienced residential move that are at the bottom of the socio-economic ladder and suffered the worst housing conditions. In comparison with the displaced residents the stayers are much less satisfied with their dwelling but are more satisfied with their neighbourhood. However, regression analysis reveals that residence in Huangpu, the central core of the city, rather than in more outlying districts is associated with comparatively low satisfaction levels. The regression results also show that Shanghai people are quite pragmatic in their assessment of residential satisfaction. The more essential aspects of housing consumption, such as dwelling size, building quality and safety, toilet availability, hygiene and estate management, contribute much more to the overall satisfaction level than the more add-on features such as leisure and sports facilities and broad band networks. As such it is not surprising to find that the displaced residents are generally satisfied with the rather basic compensation housing offered, which echoes the findings of Wu's (2004) study.

## 6. Acknowledgement

The authors would like to acknowledge the support of the Hong Kong Research Grant Council (Grant No. HKBU2135/04H). Thanks are also due to Professor Hanlong Lu of the Shanghai Academy of Social Sciences who helped implement the household interviews and Mr Quan Hou of Hong Kong Baptist University for assistance in the map and statistical works.

## 7. References

- Abramson D, 1998, "Juzhuqu gaizao zuowei yige wenhua wenti: cong xifang de jiaodu kan Beijing de jiucheng gaizao (Neighbourhood Redevelopment as a Cultural Problem: A Western Perspective on Current Plans for the Old City of Beijing)" *Jianzhu Xuebao (Journal of Architecture)* **2**: 47-49, 68.
- Alonso W, 1964, *Location and Land Use* (Harvard University Press, Cambridge).
- Cartier, 2002, Transnational urbanism in the reform-era Chinese City: Landscapes from Shenzhen. *Urban Studies*, **39** (9): 1513-1532
- Chen Y, 1997, "Jiucheng gaizao yao jiaqiang chengshi guihua de hongguan tiaokong zuoyong (Urban reconstruction needs to strengthen the macro-control function of city planning)" *Chengshi Guihua Huikan (City Planning Forum)* **2**: 40 – 45.
- Dai C, 1999, "Jiucheng lao linliqu gengxin gaizao de zhengti sixiang—guanyu juzhu huanjing xieji guannian de sikao (The overall thinking on the renewal and reconstruction of old neighbourhoods in the old city: Thoughts on residential environmental design)" *Chengshi Yanjiu (Urban Research)* **3**: 43 - 47.
- Fang Y, 2006, "Residential satisfaction, moving intention and moving behaviours: a study of redeveloped neighbourhoods in inner-city Beijing" *Housing Studies* **21** (5) 671 - 694.
- Fang Z, 2001, "Duoyuan de gongsheng: lishi diduan gaizao gengxin de xianshi daolu – yi Shanghai Shi linong zhuzhai de jiuqu gaizao weili (Multi-symbiosis: Realistic path of renewal of historical districts – an example of lane housing district reconstruction in Shanghai City)" *Tongji Daxue Xuebao (Tongji University Academic Journal)* **4**: 17-21, 56.
- Fang, K and Y Zhang, 2003, Plan and market mismatch: urban development in Beijing during a period of transition. *Asia Pacific Viewpoint*, **44** (2): 149-162.



- Gu J, Liu F, 1997, "Shanghai dongcaiqian wenti yanjiu (A study on resettlement and demolition in Shanghai)" *Shanghai Shehui Kesheyuan Jikan (Quarterly of the Shanghai Academy of the Social Sciences)* **3**: 140 - 148.
- He S, Wu F, 2005, "Property-led redevelopment in post-reform China: a case study of Xintiandi redevelopment project in Shanghai" *Journal of Urban Affairs* **27**(1) 1 - 23.
- He, S and F Wu, 2007, Socio-spatial impacts of property-led redevelopment on China's urban neighbourhoods, *Cities*, 24 (3): 194-208.
- Huang, Y Q and W A V Clark, 2002, Housing tenure choice in transition China: a multilevel analysis. *Urban Studies*, 39 (1): 7-32.
- Li Z, 1997, "Shiyiing shichang jingji fazhan tuijin chengshi fangwu chaiqian (Adjust to market economy and promote demolition of urban housing)" *Changjiang Jianshe (Yangtze Construction)* **6**: 4 - 5.
- Li Z, Wu F, 2006, "Socio-spatial differentiation and residential inequalities in Shanghai: a case study of three neighbourhoods" *Housing Studies* **21**(5) 695 - 717.
- Li, S-M, 2005, China's changing urban geography: a review of major forces at work. *Issues and Studies*, 41 (4): 67-106.
- Liu Z, Gui G, Chen Z, 2007, *Chengshi Duihua: Guojixing Dadushi Jianshe yu Zhufang Tanjiu (City Dialogue: A Inquiry of Construction and Housing in International Metropolises)* (Enterprise Management Publishing House, Beijing).
- Lo, C P, 1987, Socialist ideology and urban strategies in China. *Urban Geography*, 8 (5): 440-458.
- Logan, J R and H L Molotch, 1987, *Urban Fortunes: the political economy of place.* Berkeley, California: University of California Press.
- Lu J, 1997, "Beijing's old and dilapidated housing renewal" *Cities* **14**(2): 59 - 69.
- Michelson, M, 1977, *Environmental Choice, Human Behavior, and Residential Satisfaction* (Oxford University Press, New York).
- Oi, J, 1992. Fiscal reform and the economic foundation of local state corporatism. *World Politics*, 45 (1): 99-126.
- Qiu J, 2002, "Junshenhua yundong dui woguo jiucheng gengxin de qishi (Implications of gentrification for urban renewal in our country)" *Redai Dili (Tropical Geography)* **22**(2): 30 - 34.
- Shanghai Ministry of Construction, 2005, Unpublished Document.
- Smith, N, 1979. Towards a theory of gentrification: a back to the city movement by capital not people. *Journal of the American Planning Association*, 45: 538-48.
- Stone, C N, 1993, Urban regime and the capacity to govern: a political economy approach. *Journal of Urban Affairs*, 15 (1): 1-28.
- Wang D, Li S, 2004, "Housing preferences in a transitional housing system: the case of Beijing, China" *Environment and Planning A* **36**(1) 69 - 87.
- Wang D, Li S, 2006, "Housing reform, socio-economic differentials, and stated housing preferences in Guangzhou, China" *Habitat International* **30**: 305 - 326.
- Wang J, 2000, "Chengshi caiqian shehui wenti qineng yicai liaozhi? (Can the social problems of urban demolition and resettlement be demolished away?)" *Liaowang Xinwen Zhoukan (Liaowang News Weekly)* **45**: 8 - 9.
- Wang L, 2003, "Beijing fajia qigao de lixing fenxi (Rational analysis of the abnormally high housing prices in Beijing)" *Zhongguo Shehui Jingji Yanjiuzuo* (<http://ie.cass.cn/yjw/> sighted 7 June 2006).

- State Council of the People's Republic of China (SCPRC), 2004 Guanyu kongzhi chengzhen fangwu chaiqian guimo yange chaiqian guanli de tongzhi (On controlling the size and strengthening administration of demolition in cities and towns) <http://www.china.org.cn/chinese/PI-c/586146.htm>
- DEFRA, 2004 Making Space for water: Developing a New Government Strategy for Flood and Coastal Erosion Risk Management in England Department for Environment, Food and Rural Affairs, <http://www.defra.gov.uk/corporate/consult/waterspace/>
- SCPRC, 2004, *Guanyu kongzhi chengzhen fangwu chaiqian guimo yange chaiqian guanli de tongzhi (On controlling the size and strengthening administration of demolition in cities and towns)* State Council of the People's Republic of China, <http://www.china.org.cn/chinese/PI-c/586146.htm>.
- Tang, W S, 1994, Urban land development under socialism: China between 1947 and 1997, *International Journal of Urban and Regional Research*, 18: 395-415.
- Wong, C P W, 1997. *Financing local government in the People's Republic of China*. Hong Kong and New York: Oxford University Press.
- World Bank, 1993, *China Involuntary Resettlement (Report No. 11641-CHA)*. China and Mongolia Department, June 8, 1993.
- Wu F, 2001, "Housing provision under globalization: a case study of Shanghai" *Environment and Planning A* **33**: 1741 - 1764.
- Wu F, 2004, Residential relocation under market-oriented redevelopment: the process and outcomes in urban China, *Geoforum*, 35: 453-470.
- Xinhuanet 2003, "China encountered with peak of letter-writing and visiting, new leaders grilled by extreme challenges (2003 Zhongguo zaoyu xinfang hongfeng, xin lingdaoren mianlin feichang kaoyan)", 8 December. (<http://big5.china.com.cn/chinese/2003/Dec/457238.htm> sighted 7 June 2006).
- Yang J, 1994, "Qiantan danqian jiucheng gaijian (A brief note on today's urban reconstruction)" *Chengshi Guihua Huikan (City Planning Forum)* **2**: 22 – 28.
- Yao L, Zhao L, 2000, *Dui shichang jingji tiaojian xia jiucheng gaizao de zai renshi (Re-examining urban reconstruction under market economy)*" *Chengshi Wenti (City Planning Problems)* **2**: 39 - 42.
- Ye D, 2003, "Jiucheng gaozaozhong yinfa de shehui gongping wenti (Social equity issues surrounding urban reconstruction)" *Chengxiang Jianshe (Urban and Rural Construction)* **4**: 65 - 66.
- Yeh, A C O and F Wu, 1996, The new land development process and urban development process and urban development in Chinese cities. *International Journal of Urban and Regional Research*. 20 (2): 330-353.
- Yuan J, 1998, "Dui woguo jiucheng gaizao de ruogan sikao (Some thoughts on urban reconstruction in our country)" *Jingji Dili (Economic Geography)* **18**(3): 25 - 29.
- Zhang F, 1998, "Chengshi fangwu caiqianzhong de wenti ji qi duice (The problems during demolition of urban housing and their policy response)" *Zhongguo Fangdichan (China Real Estate)* **213**: 67 - 70.
- Zhang Y and K Fang, 2004, Is history repeating itself? From urban renewal in the United States to inner-city redevelopment in China, *Journal of Planning Education and Research*, 23: 286-298.
- Zhao H, Zhao A, 1998, "Lun wanshan woguo chengshi fangwu caiqian zhidu de ruogan wenti (On how to perfect the system of urban housing demolition in our country)" *Falu Shiyong (Law Applications)* **4**: 12 - 14, 21.

- Zhu J, 1999, "Local growth coalition: the context and implications of China's gradualist reforms" *International Journal of Urban and Regional Research* **23** (3): 534 - 548.
- Zhu J, 2005, "A transitional institution for the emerging land market in urban China" *Urban Studies* **42**(8): 1369 - 1390.
- Zhu Y, 2006, "Patterns of population and employment change in Shanghai in the 1990s: a zonal analysis with international comparisons" *International Development Planning Review* **28**(3) 287 - 209.

## **Explaining Housing Choice in China by Family and Community Factors**

**Zhongdong MA, Guowei ZHOU, Haixian WANG**

*Center for Spatial and Socio-demographics, HKUST*

### **Abstract**

Housing in China has undergone fundamental changes from a basic residence distributed to working families to an important aspect of quality life, a symbol of social status, and even an investment. In this paper, we try to explain housing choice in China in a multivariate framework, using statistics at a county/district level together with detailed personal and household information contained in China's 2005 mini-census. Results help to reveal the forces behind the booming of real estate markets, particularly in large cities in China.

## **Changing Population, Housing and Life Style in Mega Cities in China**

**Zhigang NIE, Tu LAN, Zhihao LV, Zhongdong MA**

*Center for Spatial and Socio-demographics, HKUST*

### **Abstract**

Urban life style has diversified in mega cities in China in which housing is an important aspect. Using census microdata and GIS data, we attempt to study the changing urban life style, housing segmentation and distribution in the context of changing spatial and socio-demographics.

## Planning and Governance I

# Property Rights Structured Bid Rent Function in Urban Sprawl: The Case of Dashi, Guangzhou

Xuan LIU<sup>1</sup>

<sup>1</sup> School of Geography and Planning, Sun-Yat Sen University

No. 135, Xingangxi Road, 510275 Guangzhou, China

Tel: +86-133-6055-9765

Email: liuxuan3@mail.sysu.edu.cn

## Abstract

China's economic reform in the past two decades has followed the approach of partial and gradual reform and result in inefficient resource allocation, which causes urban sprawl. By evaluating three sprawl patterns – the development of industry zone, large real estate projects and semi-urbanized villages – in Dashi, a town in urban periphery of Guangzhou, this study reveals the increasing in yield and reducing in cost are induced by unevenly defined property rights structure, and result in distorted urban bid rent function which finally leads to urban sprawl.

## 1. Introduction

The phenomenon of disproportional expansion of urbanized areas into undeveloped land is generally called “urban sprawl”, which has been at the centre of current debate on urban structure. In recent years, the majority of urban planners have expressed concerns about sprawl's possible consequences, especially its economic and social costs (Real Estate Research Corporation, 1974; Ewing, 1997; Urban Land Institute, 1998; Burchell, 1997 and Freilich and Peshoff, 1997). In the meantime, studies on the causes of urban sprawl have been particularly focused on market forces, problematic public policy, and the cultural background (Zhang, 2000). Government policy on taxation, public spending, and infrastructure provision have especially been questioned in America (Richmond, 1995 and Katz and Bernstein, 1998).

Compared to the rich literature on urban sprawl in Western cities, relatively little is known about the physical consequence and the causes of urban sprawl in China. Naughton (1995) first noticed the spillover of urban activities into suburban regions and concluded sprawl in China is more a result of changing internal economic forces that brought previously urban economic activities into peripheral areas. In addition to the expansion of urbanized area into farmland, sprawl in the Chinese context is also the sprawl of state power. Uneven land reform causes “envelope” between urban land and rural land and results undesirable consequences emerge on urban fringe (Deng, 2004). In summary, existing researches have attributed China's urban sprawl to the land market force created after reform, and to the changes in power distribution over urban development, with little consideration of human behaviors within the existing property rights structure.

The urban areas are expanding with constant definition and redefinition of property rights over land (Zhu, 2004). Land property rights matter for the performance of urban expansion (Fischel, 1985), as voluntary exchange cannot flourish and develop into firms, markets and governments without institutions to assign, arbitrate and protect private property rights (Webster & Lai, 2003).

This research summarizes three seemingly independent patterns of urban expansion in China, namely industry zones, expansion of villages and real estate development, presenting Dashi Town, Guangzhou as a case study. A property rights approach is used to analyze the causes of urban sprawl. This research has found that property rights structures of different actors distort the performance of urban bid rent curve by offering incentives to develop rural land excessively and by creating failures to account for the cost of losing open spaces, increasing congestion, and shortage of public infrastructures.

## 2. Distorted Urban Bid Rent Curve for Urban Sprawl in transitional China

### 2.1 Urban bid rent curve

Under perfect competition, land conversion is guided by the economist's "invisible hand," which directs resources to their highest and best use. With economic development, demand for land for development shifts. During this process, competition for land between urban land users and non-urban users (farmers and other agricultural users) helps to determine the spatial size of cities – developers bid away additional land from agricultural users. A successful bid by developers means that society values the new development on the land more than the farm output that is foregone. If farmland became truly scarce and in need of preservation, its selling price would be high, making the land resistant to urban encroachment. Thus the urban bid rent curve shifts upwards to intersect the agricultural bid rent curve at a further distance from the urban centre (Figure 1).

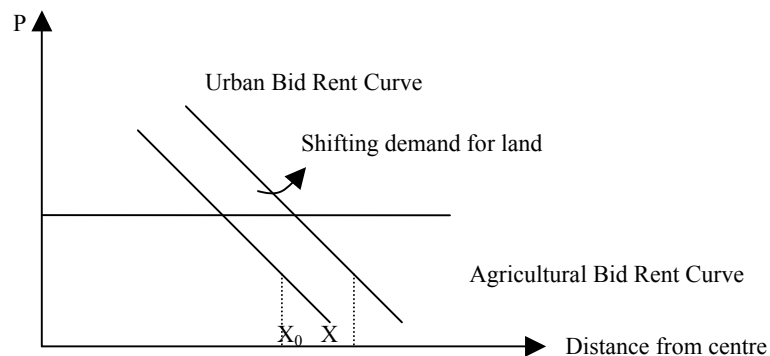


Figure 1 Urban Bid Rent Curve under Perfect Competition

### 2.2 Distorted urban bid rent curve for urban sprawl

The rent that urban land users could afford depends on the yield he could receive from the land for development and the cost it will occur by using the land. Both increasing in yield and reducing in cost could thus result in higher affordable land rent by urban land users and further distance the land users would like to accept from the urban centre. An optimal urban size could be achieved under perfect competition as all social costs are considered in defining the urban bid rent curve. However, in transitional China, the increasing in yield and reducing in cost are actually induced by unevenly defined property rights structure, and resulted in a distorted urban bid rent curve (Figure 2). Urban sprawl thus occurred and the spatial growth of a city is excessive relative to what is socially desirable.



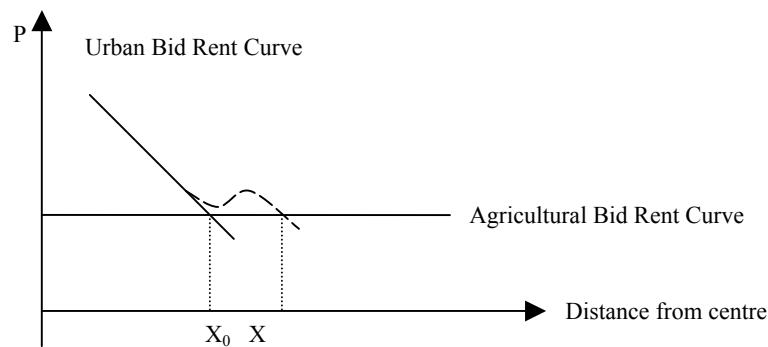


Figure 2 Distorted Urban Bid Rent Curve for Urban Sprawl in Transitional China

## 2.3 Hypothesis: property rights defining distorted urban bid rent function in transitional China

### 2.3.1 increasing yield

#### 1. increasing yield for the government by restrict rights of farmers

Generally, property rights are explained as the bundle of rights to use and dispose of an economic resource and to derive utility (income) from it. Following the definition of property rights, the right of ownership contains three elements: exclusivity of ownership, transferability of ownership, and constitutional guarantees of ownership (Pejovich, 1997). By internalizing the costs of a decision, the exclusivity of ownership creates strong incentives for owners to seek the highest utility from their property. Transferability of ownership provides incentives for resource to be transferred from a less optimistic to a more optimistic owner. Meanwhile, the constitutional guarantees of ownership create incentives for individuals to accumulate wealth via investments that have long-run consequences (Alchian, 1977). Change in any part of property rights will result in change in human behaviors. Uneven land reform in transitional China actually offers greater rights to the government than the farmers by restricting the transferability and guarantees of ownership over the collective owned rural land of the farmers, thus increasing the possible yield dramatically for the government in urban sprawl.

#### 2. increasing yield for farmers by strengthen land use rights

According to the Roman law which specifies several categories of property rights, ownership rights consist of the right to use assets (*usus*), the right to capture benefits from assets (*usus fructus*), the right to change its form and substance (*abusus*), and the right to transfer all or some of the rights specified above to others at a price mutually agreed upon (Pejovich, 1990: 27-28). Without a proper define of farmers' right to change properties' form and substance and the right to capture benefits, the farmers tender to build higher and rent some rooms out without thinking its social costs.

### 2.3.2 reducing costs

#### 1. reducing transaction costs for the government

Transactions only occur when the increased utility it brings is larger than the transaction costs that its operation needs. Transaction costs are usually defined as the costs of all resources required to transfer property rights from one economic agent to another. Any transfer occurs with exchange entail costs that result from both parties attempting to determine what the valued attributes of these assets are (North, 1990). Transaction costs are saved when owners of labor, land and capital resources pool

property rights and submit to planned economic co-operation (Webster & Lai, 2003). In firms and governments, the rearrangement of activities and rights would not be decided by contract but as a result of an administrative decision as to how the rights should be used. Especially for the government, it is able to avoid market altogether if it wishes (Coase, 1960; Demsetz, 1967). In another word, transactions are replaced by systems of rules in this situation.

*2. failure in accounting for social costs of externalities both for the government and farmers*

Barzel (1997) views property rights and resources as having multiple attributes. The degree to which ownership is established over a commodity's separate attributes depends on the cost of creating and policing contracts that establish that ownership. Attributes to which rights are not assigned by formal or informal contract are in the public domain<sup>6</sup> and subject to competition (Webster & Lai, 2003). Which attributes are left in or removed out the public domain depends on the attributes value and the cost of assigning property rights over the attributes – transaction costs. In the absence of clearly assigned rights, resource attributes left in the public domain are likely to be dissipated due to the resource expended in capturing or protecting them from overusing (Webster & Lai, 2003). Failures in defining rights attributes will inevitably resulted in market failures in accounting for social value of open space, the social costs of congestion and the costs of public infrastructures, which are exactly the main sources of the forces underlying urban sprawl (Brueckner, 2000).

**3. Urban Sprawl Patterns in Dashi**

A series of market-oriented transformations, e.g. institutional reform, land reform, and housing commodification, have stimulated extensive urban development in the post-reform era (Yeh and Wu, 1996, Tang, 1997, Gaubatz, 1999, Wu, 2001 and Zhu, 2004). Many patterns of urban expansion are actually inefficient (Deng, 2004). This research takes Dashi Town, Guangzhou as the study area for an in-depth analysis of the patterns and forces of urban sprawl in transitional China.

Being one of the cities that first been designated open to “market”, Guangzhou’s development has been “one step ahead of China” for a long period (Xu & Yeh, 2003). The city has benefited from preferential policies, e.g., the most relaxed financial policy and the first locations set aside for foreign trade (Fan, 1995). Both of the economy and the size of Guangzhou have grown very rapidly since the reforms (See Table 1, Figure 3). Rapid urban sprawl generates numerous opportunities and challenges. On one hand, it has contributed to economic growth; on the other rapid urban sprawl has resulted in many problems such as congestion, shortage of facilities and social conflicts.

Table 1 Expansion of Built Area of Guangzhou

Year	1980	1985	1990	1995	2000	2005
Population <sup>1</sup>	5.02	5.45	5.94	6.47	7.01	7.50
Built area <sup>2</sup>	135.96	162.92	187.40	259.10	431.5	734.99

1.unit: million; 2.unit: km<sup>2</sup>

<sup>6</sup> According to Barzel (1997), public domain means the domain (spatially or otherwise defined) within which competition occurs in the consumption of resource attributes.

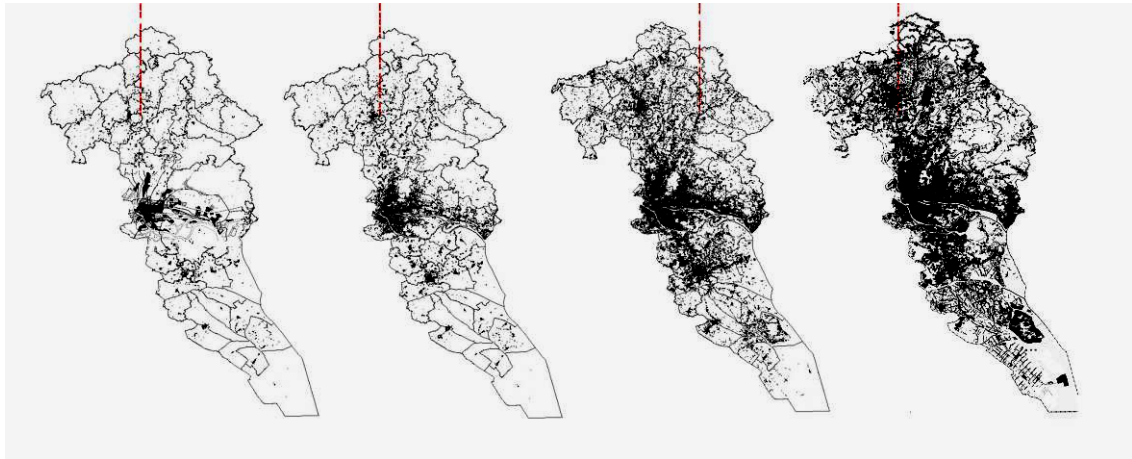
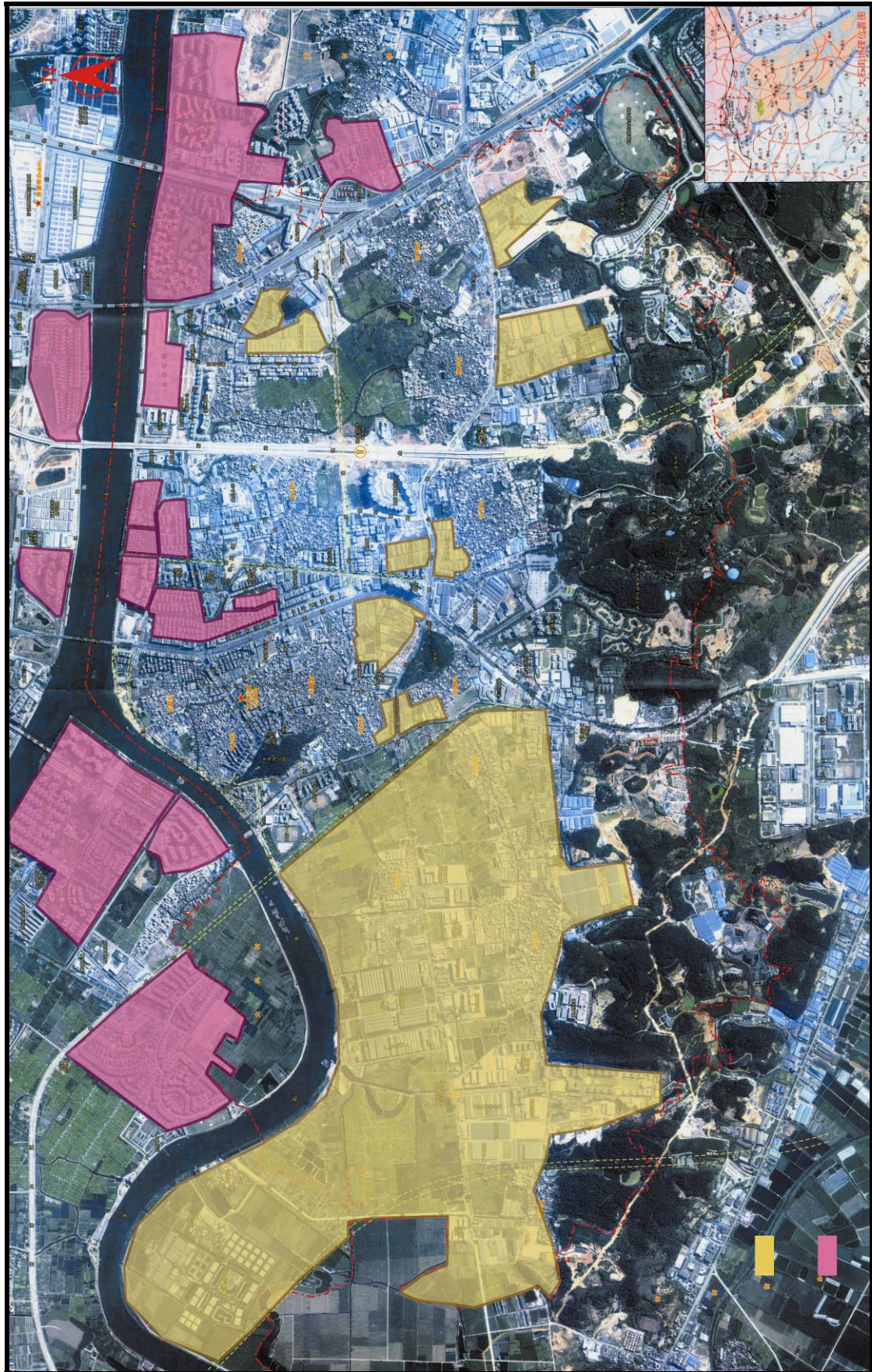


Figure 3 Expansion of Built Area of Guangzhou

Source: files in Urban Planning Bureau of Guangzhou, access on 10 Sep. 2007

To gain insight into the process of urban sprawl in Guangzhou, Dashi with an area about 44 km<sup>2</sup> is chosen for detail investigation. It is not until 2004, Dashi was a town located at the north part of Panyu city, separated from Guangzhou by Lijiao Channel. It contained 23 villages and 5 *Juming weiyuanhui* (residents committee). In 2000, Panyu city was assigned as a district of Guangzhou and Dashi was reorganized as a Jiedao (street community) in 2004. Long before Dashi is administratively urbanized, large amount of development has been carried out in Dashi. Industrial zones, expansion of villages and development of large real estate projects have all been observed. These typical urban forms are interlacing with undeveloped farm land, and result in a typical urban sprawl landscape (see Figure 4). This study covers the period from 1990 to present, during which the existing land use pattern were formed during the urban sprawl process.



**Figure 4 Land Use in Dashi** source: author's survey

Three seemingly independent patterns of urban sprawl in Dashi have been observed, some are physical changes, including the development of industry zone and residential projects, the other is the undergoing changes in semi-urbanized villages.

### 3.1 Industry zone

Dashi has an industry zone named “Shibei” with an area of 466 ha and several small industries which belong to villages. Even in government developed “Shibei” Industry Zone, only 76 ha is state owned, accounting for 16% of the total area of this industry zone. By 2003, there is over 10 km<sup>2</sup> of land used for industry in Dashi but the total output (industry value-added) is just 1.04 billion Yuan, i.e. the output rate of industrial land is about 100 million/km<sup>2</sup>, which is just 1/10 of the output rate of some YRD such as Wenzhou (898.86 million/ km<sup>2</sup>), Shaoxing (1.2 billion/ km<sup>2</sup>)<sup>7</sup>.

Low output is due to the land use patterns and development types. It is observed in Shibei Industry zone and other small industry zones, that modern firms of electronic facilities manufactory are surrounded by rural land and vacant plots, resulting in the drop on average output of the land. The developed land accounts for only 36.2% of the total area<sup>8</sup>. On land with different owners and leaseholder, characteristics of development are different (see Figure 5).

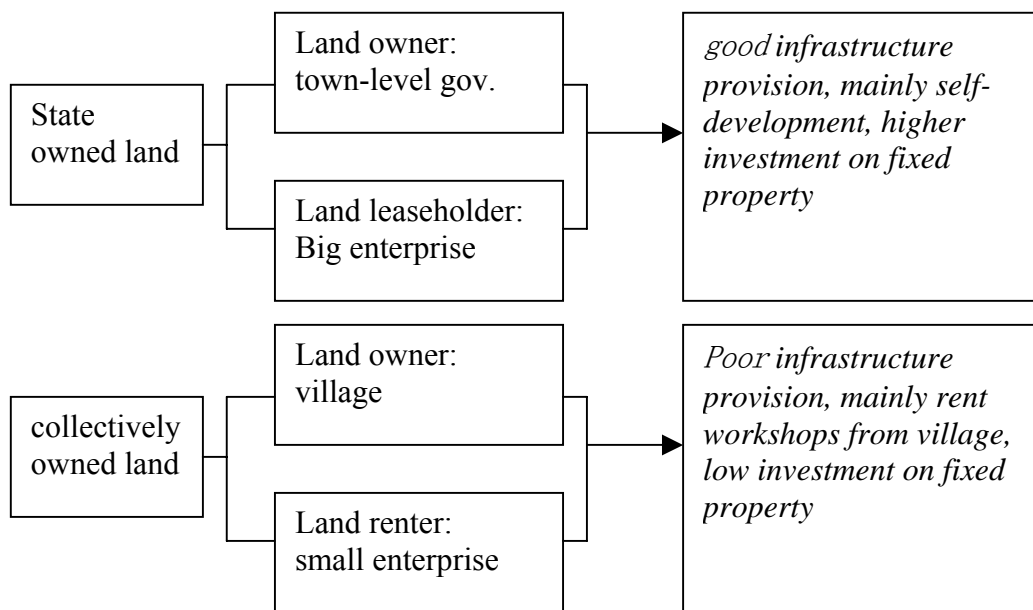


Figure 5 Different Characteristics of industrial development on State and Collectively owned land

### 3.2 Large real estate projects

Since the middle 1990s, Panyu became the hotspot for residential development for Guangzhou. Large amount of large size residential projects were developed along Huanan Expressway and composed “Huanan Block” – a famous and typical development area with large residential projects (see Figure 6).

<sup>7</sup> Source: ‘report on agglomeration plan for Panyu’s industry zone’ (2007), Panyu Planning Bureau internal working report. access on Nov. 7, 2007

<sup>8</sup> *Id.*

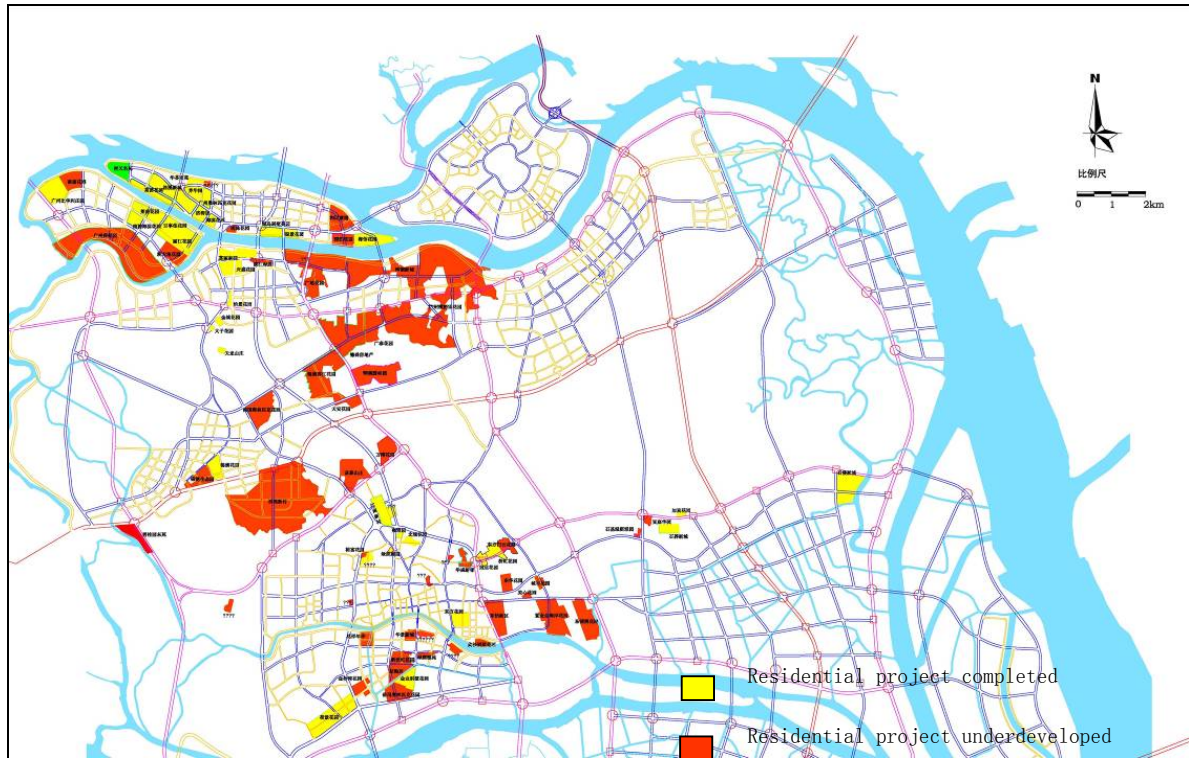


Figure 6 Location of Residential Projects in Panyu

Source: files in Urban Planning Bureau of Panyu

In Dashi, LiJiang Garden, Luoxi New Town, Xinghe Bay are all large residential projects with over 100 ha. Such projects are aiming at fulfill the need for Guangzhou citizens by providing bigger apartments, better facilities, luxurious environment with relatively lower price (Figure 7).





Figure 7 Environment of Large Residential Projects in Dashi

Source: photos taken by author

Due to the poor condition of existing public facilities, the developers have to provide all kinds of infrastructures and amenities within the residential projects. For example, Lijiang Bridge in Lijiang Garden, Zhixin Middle School (Xinghe Bay) are all provided by developers. To attract Guangzhou citizens, such facilities are provided in good qualities (see Figure 8). Xinghe Bay even decorates and builds a wooden sightseeing road along Back Channel of Pearl's River.



Figure 8 Public Facilities in Large Residential Projects in Dashi

Source: photos taken by author

### 3.3 Semi-urbanized villages

Another important phenomenon in Dashi, which is the urban fringe of Guangzhou, is the emergence of semi-urbanized villages. Its development is “the expansion of urban population, especially migrant workers and temporary urban residents ... and accompanying ‘illegal’ construction into rural villages on the urban fringe that gradually become ghetto-like, sprawling migrant enclaves” (Deng, 2004: 211). Most peasants live in new villages and lease their old houses to migrants, or construct more levels beyond allowed on their land and lease them out.

Together with the change of residents, the buildings are still low-density bungalows. Semi-urbanized villages represent another type of urban sprawl in Chinese cities. Their distinctive feature is low (construction) density and lack of provision of public facilities such as sewage, tap water, etc (see Figure 9). Even though significant ‘physical’ sprawl is not shown, the change of population profile in these villages indicates expansion of urban population.



Figure 9 Surroundings in Semi-urbanized Villages  
Source: photos taken by author

#### **4. Property Rights Structured Development Process**

Urban sprawl is a process of urbanization which exceeds the social desirable size. It is widely accepted as a process of urbanization of rural population into urban residents (McGee, 1989; Lin, 2001; Leaf, 2002), it is also a process of changes from rural land to urban land. According to Land Management Act (2004), the dual system of land ownership continues during the transition in China, which means the urban land is owned by the state and the rural and urban periphery land is owned by peasant collectives (excepted for those legally owned by the state) and allocated to villagers to use. In the emerging land market, the capitalization of land is uneven for two types of land based on the existing property rights structure.

#### **4.1 Property rights structure under dual-system of land ownership**

##### **4.1.1 State owned land**

In the economic point of view, efficiency of a property rights structure depends on whether it can guide incentives to achieve a greater internalization of externalities (Demsetz, 1967). Generally, an increase of communality of property, which is often expressed as the increase in the number of owners, leads to increase of the cost to internalize. Urban land reform started late but at a faster pace toward private property



rights. In 1988 the Constitution was amended and ‘land use right can be transacted according to the law.’ The formal framework of public land leasing was established in 1990 in the form of two decrees from the State Council. For state owned land, separating of land ownership and land use right allows transfer of land use rights, and arouses the emergence of urban land market. In another word, the rights of exclusivity, to capture benefits, to transfer all or some of the rights are guaranteed for the land users in the land market. What could be acquired through urban land market are full rights over land during the leasehold period.

For the local government, what it could capture during urban land use is not the land value but the tax paid by land users. As holding property is currently not taxed in China, industrial and commercial development is thus promoted as it provides a bigger base for taxing.

#### 4.1.2 Collectively owned land

China's rural land reform started in 1978 when the ‘Household Responsibility System’ was introduced. Under this system, farmland owned by the former communes was allocated to each peasant family. However, China's current constitution stipulates that rural land belongs to peasant collectives such as villages. Each peasant has the use right of farmland and the land for his house, but cannot alienate the use right. Only administrative allocation once every 10 or 15 years can adjust land use among peasants. *Land Administration Law* clearly stipulates that ‘for peasant collective-owned land, land use right cannot be sold, transferred or leased for non-agricultural construction’ (Pu and Li, 1998: 176). The conversion of rural land to urban land is completely controlled by local government through eminent domain. Collectively owned land could be developed until it is acquired and leased out by the government (see Figure 10). It is the government who could claim the revenue generated by land use change. Through this process the villagers could only obtain compensation for pass the land out but not the value increased caused by the change of use type of the land. In land market, land value should be the present value of future income. Taking industrial land for example, current average IRR is 1.8% and the rent is ¥16000/month/Chinese acre, accounting for 0.9 million as the present value. If the land use changed to commercial use, 3 million is required as the present value. But no matter how great the future income could be, the villagers could only get the compensation for 30 years' average of annual agricultural production value in addition to compensation for attachments, crops and vegetables – generally about 50000/Chinese acre<sup>9</sup> in Pearl’s River Delta.

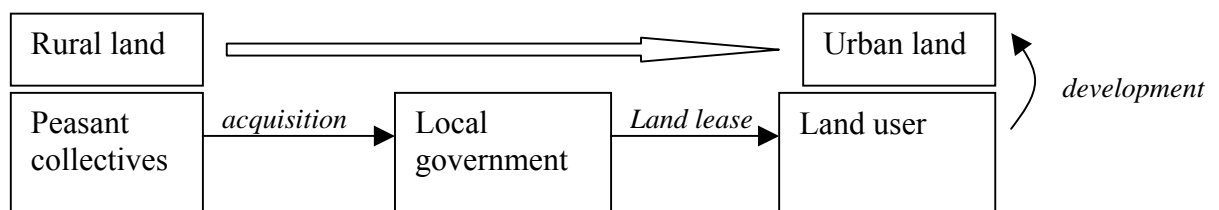


Figure 10 Change Process of Rural Land to Urban Land

Occasionally, the government would leave 10-15% of the acquired land to peasant collectives as economic development land, allowing it use for industrial or

<sup>9</sup> Source: interview to officials in Construction Service Centre of Dashi, on 8<sup>th</sup> Nov, 2007.

commercial purpose. Since the later 1990s, Panyu started to promote shareholderization of rural land whose core is endowing the ability to share the revenue of industrialization with their property rights over land to the peasants. It means the 'Household Responsibility System' was replaced by system of land shareholdings. As the deputy of land owner, the village collectives obtained the rights of management of land, and the peasants could get the dividend of the industrial or commercial use of collectively owned land.

However, the villagers must apply and pay for the permit of land use change (*nongzhuanyong zhibiao*), which is very hard and costly to obtain – the payment for transfer a Chinese acre agricultural land into industrial/commercial land is over ¥50000, which is even higher than the compensation from the government for land acquisition<sup>10</sup>. With the permit of land use change, the villagers have to provide infrastructure and public facilities by themselves. Furthermore, villagers are not allowed to transfer or mortgage the land until 2005, which reduces the land value of collectively owned land seriously.

On Oct. 1, 2005, "Measures of Transferring Collectively Owned Economic Development Land" was issued to bring collectively owned land into land market<sup>11</sup>. However, under public community rights the consequences of any decision are less fully thrust upon the decision maker and make some resources appear to be used wastefully or inappropriately (Demsetz, 1967). Transfer of private rights is thus too costly to achieve. Negotiation cost among member may be too high because of the large number of interacting parties. Since it is only through membership in the group that an individual can capture some benefits from resources held in common, communal ownership creates a bias against decisions that have long-term consequences. As the result, there is no sample of successfully transferred collectively owned land in Dashi or elsewhere in Guangdong<sup>12</sup> by far.

It is evident that the reform progresses on urban and rural land are uneven given their fundamentally different property rights structures. Based on uneven property rights over state owned and collectively owned land, path of land use, allocation and exchange for two kind of land are distinctly different. Compare with clear transfer and use of land use rights of state owned land at market price, value of most collectively owned land could not be catch through land market on one hand. Collectively owned land could be developed until it is acquired by the government, through which process the villagers could only obtain compensation of 30 years production for pass the land out. On the other, collectively owned land allowed for industrial or commercial use requires investment on permits of land use change, infrastructures and public facilities, and was not allowed to transfer or mortgage until 2005. Different definition of property rights create a huge gap between the value of rural and urban land, and thus promote the government and villager collectivities to change the land use.

## 4.2 Causes of Urban Sprawl Patterns

---

<sup>10</sup> Source: interview to officials in Construction Service Centre of Dashi, on 8<sup>th</sup> Nov, 2007.

<sup>11</sup> Collectively owned land is allowed to lease, rent, transfer and mortgage, but not allowed for commercial real estate projects development.

<sup>12</sup> Source: interview of officials in Guangdong Land Acquisition Service Centre on 18 Sep. 2007.

The concept of urban sprawl has been widely used in the planning literature to indicate inefficient urban expansion. The inefficient spatial patterns of urban expansion, as demonstrated by the paradox of industry zones, large real estate projects and semi-urbanized villages, do point to the true meaning of ‘urban sprawl’—inefficiency in spatial resource allocation on urban fringe. We employ this concept – ‘urban sprawl’ – to evaluate observed phenomena in Dashi Town via a property rights approach.

#### **4.2.1 Industry zone**

As mentioned above, two different types of industry zones exist in Dashi, which is a typical phenomenon through out PRD – industry zone on state-owned land and on collectively owned land. Different development processes on two types of land reflect different property rights structures. To increase the tax base, industrial development is advocated. The local government has to provide industrial zones with full infrastructure and very low land prices to attract investors and enterprise.

The big gap between urban land price, which is determined by the market, and rural land compensation, which is artificially low, generates strong motivation for local government to acquire large pieces of land for development of industry zone, so that a scale economy could be achieved. With omnipresent political power, there is little cost for the local government to hold the land once acquired. This inflates local government’s appetite that results in more land expropriated than necessary. Large amount of land in Shibe Industry zone are thus acquired but undeveloped.

In the meanwhile, almost every village has its own industry zone in Dashi due to the new system of land shareholdings. Innovation in institutions results the consolidation of the land for industrial or commercial use, greatly accelerating the industrialization of village economy. As the land users are not allowed to mortgage the land, the mode of “investment with low technology + labors with low capability + collectively owned land with low price” does not compose a necessary condition for higher and better use of land. Low output is observed in every village industrial zone. The chain of “low price land – attract investment – industry development and rent collect – new land development – new land rented” goes on, and pushes the villages to develop land at a low level to ensure the revue for all peasants.

#### **4.2.2 Real Estate Development**

Being developmental state (Zhu, 2004b), the local government monopolize the land leasing for real estate development (Wu, 1998). As the land leasing became a critical revenue source for the capital-hungry local government, the local government was keen on leasing out as much land as possible to generate revenues. From July 1992 to June 1998, Guangzhou Urban Planning Bureau issued 2208 Planning Permissions (covering a total area of 60.2 km<sup>2</sup>) for real estate development projects. However, there were only 765 Land Use Notes<sup>13</sup> issued by Land Resource and Housing Bureau, covering a total area of 9.3 km<sup>2</sup> (Li, 2002). In other words, less than 16% of land plots supplied to the real estate market were actually developed.

Dashi’s land is leased for real estate development with the same reason. As the one-off payment for land use eliminate the government from long-term development profit.

---

<sup>13</sup> Issue of Land Use Note means the developer has reached all of the requirement and got enough finance support. In another word, the development is ready to be carried out.

The local governments of Panyu and Dashi even create a coalition with investors for real estate development, which means the investors have to cooperate with the government subordinate development companies (Table 2). By share the shareholding, the local government could also share the revenue of development not only be obtain land lease payment but also the profit by sale the housing units.

Table 2 Coalition between Local Government and Investors for Some Real Estate Projects in Dashi (Shareholding)

Project name	Government subordinated development company	Investor 1	Investor 1
Xinghe Bay	Panyu Unite Development Co. Dashi Division (30%)	Guangzhou Hongyu Group. (51%)	Shenzhen Southern Xiangjiang In. (19%)
LiJiang Garden	Panyu Unite Development Co.	Yuhai Group	
Luoxi New Town	Kaiyuan Real Estate Industry Co.	Yourong Ltd. (HK)	Hengji Zhaoye Development Co. (HK)

Source: archives in Panyu Planning Bureau, accessed on 8 Jul, 2007

Coalition between the government and investors for real estate projects development generate ambiguous property rights of developers. With the inner relationship with the government, the developers enjoyed frequent change of land use control parameters upon their application (Table 3), many of which are cut of public facilities, such as nursery school, parking plots, etc. Burdens on public facilities would be shared by migrants and villagers surrounded the real estate projects, and are not counted in government's costs<sup>①</sup>.

Table 3 Frequency of Land Use Control Parameter Change in Dashi (No. of cases)

Project name	Approved Censor on plan	Change of Plan within all Censors	Approved issue of land use control parameter	Change of land use control parameter within all issues
Xinhe Bay	3	1	2	0
LiJiang Garden	24	13	4	0
Luoxi New Town	13	6	11	4
Guangdi Garden	4	1	4	0

Source: archives in Panyu Planning Bureau, accessed on 8 Jul, 2007

#### 4.2.3 Semi-urbanized villages

Absent the right to transfer the land, the peasants can only build illegal shacks or lease their extra rooms to accommodate people like migrant workers. Loose planning control on village land could not form a proper define of farmers' right to change properties' form and substance and the right to capture benefits, the farmers tender to build higher and rent some rooms out. As rights over collective owned land are not complete ones and there is uncertainty on future revenue, the development behaviors would emphasize the short-term income and the quality of the buildings is thus not good. Furthermore, ill definition on private property rights leaves the burden to the public facilities and transportation system unclear. No one is response to social problems caused by congestion of migrants. Failures in accounting for social value of open space, the social costs of congestion and the costs of public infrastructures thus caused low density and quality development – which is a typical characteristics of urban sprawl.

### 5. Conclusion and Discussion

China's economic reform in the past two decades has followed the approach of partial and gradual reform (Naughton, 1995). Trails and errors in partial reform may result in

inefficient resource allocation at the interface of different sectors (Murphy *et al.*, 1992), which includes urban sprawl excess the socially desirable scale.

Under perfect competition, land conversion is guided by the economist's "invisible hand," which directs resources to their highest and best use. Competition for land between urban land users and non-urban users (farmers and other agricultural users) helps to determine the spatial size of cities. The rent that urban land users could afford depends on the yield he could receive from the land for development and the cost it will occur by using the land. Both increasing in yield and reducing in cost could thus resulted in higher affordable land rent by urban land users and further distance the land users would like to accept from the urban centre. An optimal urban size could be achieved under perfect competition as all social costs are considered in defining the urban bid rent curve. However, in transitional China, the increasing in yield and reducing in cost are actually induced by unevenly defined property rights structure, and resulted in distorted urban bid rent function.

Three urban sprawl patterns are observed in the study area – the development of industry zone, large real estate projects and semi-urbanized villages, which are all caused by ill defined property rights over land. On one hand, the cost to acquire and develop land is very low for local government due to the dual system of land ownership. Uneven land reform thus offers greater rights to the government than the farmers by restricting the transferability and guarantees of ownership over the collectively owned rural land of the farmers, thus increases the possible yield dramatically for the government in urban sprawl – manifested as industry zone and real estate projects development.

Since the later 1990s, Panyu started to promote shareholderization of rural land whose core is endowing the ability to share the revenue of industrialization with their property rights over land to the peasants. As the deputy of land owners, the village collectives obtained the rights of management of land, and the peasants could get the dividend of the industrial or commercial use of collectively owned land. When innovation on institution was strengthened by allowance for industrial or commercial use of part of the collectively owned land, incentives are created for peasant collectives to develop industry zones.

Absence of the right to transfer the land and loose planning control on village land development could not form a proper define of farmers' right to change properties' form and substance and the right to capture benefits, the peasants thus tend to build illegal shacks or lease their extra rooms to accommodate people for rent income.

During all these process, unclear property rights cause failures in accounting for social value of open space, the social costs of congestion and the costs of public infrastructures. Both the yield and cost for urban rent function are distorted, which finally leads to urban sprawl in Chinese cities.

#### **Note**

① interviews to villagers who live in the village beside large real estate projects reveal, the living cost, including the price of vegetables, meats and other services is increased dramatically as such services serve not only low income villagers but also high income residents in real estate projects.

## 6. Reference

- Alchian, A., 1977, Some implications of recognition of property right transactions costs. in: *Economics and Social Institutions: Insights from the Conferences on Analysis and Ideology*. Boston, Mass: Martinus Nihjoff Pubulishing, K. Brunner (ed.): 234-255.
- Barzel, Y., 1997, *Economic Analysis of Property Rights*. Cambridge: Cambridge University Press.
- Brueckner, J.K., 2000, Urban Sprawl: Diagnosis and Remedies, *International Regional Science Review*, 23(2): 160–171.
- Burchell, R., 1997, Economic and fiscal costs (and benefits) of sprawl. *The Urban Lawyer* 29 2, pp. 151–181
- Deng, F. F. and Huang, Y.Q., 2004, "Uneven land reform and urban sprawl in China: the case of Beijing." *Progress In Planning* 61: 211-236.
- Ewing, R., 1997, Counterpoint: Is Los Angeles-style sprawl desirable?. *Journal of the American Planning Association* 63 1, pp. 107–126
- Fan, C.C., 1995, Of belts and ladders: state policy and uneven regional development in post-mao China, *Annals of the Association of American Geographers*, 85(3), pp.421-449
- Fischel, W. A., 1985, *The Economics of Zoning Laws: A Property Rights Approach to American Land Use Controls*. Baltimore, MD: The Johns Hopkins University Press.
- Freilich, R. and Peshoff, B., 1997, The social costs of sprawl. *The Urban Lawyer* 29 2, pp. 183–198
- Gaubatz, P., 1999, China's urban transformation: patterns and processes of morphological change in Beijing, Shanghai and Guangzhou, *Urban Studies* 36 (1999) (9), pp. 1495–1521.
- Katz, B and Bernstein, S., 1998, The new metropolitan agenda: Connecting cities and suburbs. *Brookings Review*, Fall, 4–7.
- Leaf, M., 2002, A tale of two villages: globalization and peri-urban change in China and Vietnam. *Cities* 19 1, pp. 23–31.
- Li, H.W., 2002, *Study of Urban Land Use and Management of Guangzhou*, PH.D thesis, Zhongshan University. (in Chinese)
- Lin, G.C.S., 2001, Metropolitan development in a transitional socialist economy: spatial restructuring in Pearl River Delta, China. *Urban Studies* 38 3, pp. 383–406.
- McGee, T.G., 1989, Urbanisasi or Kotadesasi? Evolving patterns of urbanization in Asia. In: Costa, F.J., Editor, 1989. *Urbanization in Asia*, University of Hawaii Press, Honolulu.
- Murphy, K., Shleifer, A. and Vishny, R.W., 1992, The transition to a market economy: pitfalls of partial reform. *Quarterly Journal of Economics* 107, pp. 889–906.
- Naughton, B., 1995, *Growing Out of the Plan: Chinese Economic Reform, 1978–1993*. , Cambridge University Press, Cambridge, MA.
- North, D.C., 1990, *Institutions, institutional change and economic performance*, Cambridge: Cambridge University press.
- Pejovich, S., 1990, *The Economics of Property Rights: Towards a Theory of Comparative Systems*, Dordrecht, the Netherlands: Kluwer Academic Publishers.
- Pejovich, S. (eds.) (1997) *The Economic Foundations of Property Rights*, Cheltenham, UK: Edward Elgar.
- Pu, Y. and Li, Y., 1998, *Explanations for P.R. China Land Administration Law*. , Law Press, Beijing.

- Real Estate Research Corporation, 1974, *The Costs of Sprawl: Environmental and Economic Costs of Alternative Residential Development Patterns at the Urban Fringe*. Government Printing Office, Washington, DC.
- Richmond, H., 1995, *Regionalism: Chicago as an American Region*. The MacArthur Foundation, Chicago.
- Tang, W.S., 1997, Urbanisation in China: a review of its causal mechanisms and spatial relations, *Progress in Planning* **48** (1997), pp. 1–65.
- Urban Land Institute, 1998, *ULI on the Future: Smart Growth*. The [Urban](#) Land Institute, Washington, DC.
- Webster C.J. and Lai L.W.C., 2003, *Property rights, planning and markets: managing spontaneous cities*. Cheltenham UK and Northampton MA, USA: Edward Elgar.
- Wu, F. (1998) The new structure of building provision and the transformation of the urban landscape in metropolitan Guangzhou, China, *Urban Studies* **35**(2), 259–283.
- Wu, F.L., 2001, China's recent urban development in the process of land and housing marketization and economic globalization, *Habitat International* **25** (2001), pp. 273–289.
- Xu, J. & Yeh, A.G.O., 2003, City Profile, *Cities*, 20(5), pp. 361-374.
- Yeh, A.G.O. and F.L. Wu, 1996, The new land development process and urban development in Chinese cities, *International Journal of Urban and Regional Research* **20** (1996) (2), pp. 330–353.
- Zhang, T.W., 2000, Land market forces and government's role in sprawl, *Cities*, 17(2), pp. 123-135.
- Zhu, J.M., 2004a, From land use right to land development right: institutional change in China's urban development, *Urban Studies* **41** (2004) (7), pp. 1249–1267.
- Zhu, J.M. 2004b, Local developmental state and order in China's urban development during transition, *International Journal of Urban and Regional Research*, 28(2), pp.424-447.

## 解讀《城鄉規劃法》的宏觀調控作用及區縣“三規合一”的試點探索

易崢

中國重慶市規劃設計研究院

Email: loisayi@126.com

### 摘要

經過近十年的醞釀，在修訂《中華人民共和國城市規劃法》和《村莊和集鎮規劃建設管理條例》的基礎上，《中華人民共和國城鄉規劃法》（以下簡稱《城鄉規劃法》）即將頒布實施。新《城鄉規劃法》的重大轉變在於從過去的著重解決技術問題轉向統籌解決公共政策問題，明確了城鄉規劃是政府指導和調控城鄉建設和發展的基本手段之一，也是政府履行經濟調節、市場監管、社會管理和公共服務職責的重要依據。由此可見，城鄉規劃正在成爲宏觀調控的重要手段之一。

土地、信貸和產業是當前中國宏觀經濟調控的重點，目前城鄉建設和發展中暴露出的主要問題包括產業選擇和布局不顧環境與資源的承載力、土地管理失控、基礎設施重復建設、資源浪費等。當前中央政府進行宏觀調控的重要手段包括市場經濟、體制調整和行政管理。《城鄉規劃法》特別強調發揮城鄉規劃在引導城鎮化健康發展、促進城鄉經濟社會可持續發展中的統籌協調和綜合調控作用，即城鄉規劃通過對空間資源合理配置與有效利用的控制和指導來實現對城鄉發展空間的統籌與調控。

除城鄉規劃之外，我國具有空間戰略屬性的規劃還有由發展與改革委員會主導編制的國民經濟與社會發展規劃、由國土資源部主導編制的土地利用總體規劃。這兩類規劃也在向著加強宏觀調控屬性的方向進行轉變，例如國家發展與改革委員會正在主導編制全國的主體功能區劃，國民經濟與社會發展規劃將不再是僅僅制定經濟社會發展目標與措施，還將強化對於國土開發空間的控制和指導；全國土地利用總體規劃以嚴守 18 億耕地底線爲基準，正在空間上落實基本農田等關鍵性資源。三大規劃的目標和意圖正在趨於協調和一致，但在地方政府的實施過程中卻存在相當的矛盾與衝突。

今年 6 月，《重慶市城鄉總體規劃（2007-2020 年）》成爲國務院首個批準的城鄉總體規劃，同時，國家批準重慶市和成都市作爲全國統籌城鄉綜合配套改革實驗區。在此背景下，重慶市在全國率先明確提出“區縣三規合一，市級三規協調”的改革思路，並以此爲目標進行規劃編制體繫、體制和實施的改革探索。

重慶市正在試點編制的區縣總體規劃，是以空間資源的優化配置爲主線，以城鄉統籌的空間發展來落實和促進區域社會經濟發展目標的實現。規劃將耕地保護、環境、資源等作爲發展的約束條件，試圖合理安排城鄉建設空間、農業發展空間、生態保育和特定功能的管制空間，並指導和約束空間發展的時序性和方向性。在探索“三規合一”的途徑中，規劃也面臨著重重困難，解決方案的理想化與現實世界存在矛盾：不以大量消耗土地資源爲代價的社會經濟發展怎麼落實，現行土地政策對農村居民點建設及農業發展的制度性障礙及土地改革的風險，西部地區城鎮化道路的復雜性對劃定城鄉建設空間所帶來的困擾等等。

### 前言

1947 年，英國頒布《城鄉規劃法》，首次將城鄉用地作爲整體納入規劃控制，奠定了二次大戰後當代城市規劃的基本體系。60 年後，在 2007 年的 10 月 28 日，《中華人民共和



《城鄉規劃法》通過並頒佈，2008年1月1日起開始施行。新《城鄉規劃法》的修訂是在1989年頒佈的新中國第一部城市規劃專業法律《中華人民共和國城市規劃法》和1993年通過的《村莊和集鎮規劃建設管理條例》的基礎上，歷時十餘年完成。

原《城市規劃法》制定於1980年代末期，還帶著濃厚的計劃經濟色彩，以及較多的有關城市規劃編制技術的內容。新《城鄉規劃法》是中國完善城鄉規劃法律體系建設，從“宣言法”階段走向“主幹法”階段的重要一步（王唯山，2003；吳志強，唐子來，1998）。在中國社會轉型與經濟轉軌的背景下，新《城鄉規劃法》的修訂過程也是社會主義市場經濟體系從無到有的建設過程。在此期間，中國經歷了高速的城鎮化，宏觀經濟經歷了多個運行週期，增長與調控一直是中國宏觀經濟的兩個主題，國家法律體系逐步完善，稅收制度改革，住房商品化，投資主體多元化，城市土地財政出現。

當前中國經濟處於全面繁榮期，為防治經濟的大起大落，保持經濟總量基本平衡，從2004年開始，中央政府就一直在進行宏觀經濟調控，此次調控將土地、信貸和產業作為重點，採取了綜合性的調控手段，包括市場經濟、體制調整和行政管理。但是，宏觀調控中採取的貨幣政策和財政政策雖能產生短期成效，但很難解決中國經濟中長期存在的大量結構性問題。結構性失衡需要政府干預，因此長遠來看，保持宏觀經濟的健康穩定運行需要從結構性問題入手，改革涉及我國中長期發展戰略的體制性和行政性政策措施。

西方城市和區域規劃理論早已明確了城鄉規劃是政府干預經濟的合理和合法手段，城鄉規劃是城鄉發展的工具，兼具行動和控制的作用（梁鶴年，2004）。在我國，城鄉規劃是區域和城市中長期發展戰略，城鄉建設與推動經濟過熱的各種要素，如土地、產業、房地產、投資需求膨脹等緊密聯繫在一起，因此城鄉規劃應作為國家宏觀調控的重要手段之一。與貨幣、金融等手段不同，作為調控城鄉建設，配置各類空間資源的法定依據，城鄉規劃的宏觀調控作用將體現在著眼於解決長期性問題，也即是結構性失衡問題。

## 1. 《城鄉規劃法》在中長期宏觀調控中的作用

### 1.1 規劃作用：解決空間資源的合理配置

《城鄉規劃法》的第一條就提出：“為了加強城鄉規劃管理，協調城鄉空間佈局，改善人居環境，促進城鄉經濟社會全面、協調、可持續發展，制定本法”<sup>14</sup>。

此條明確了城鄉規劃的本質是協調城鄉空間佈局，改善人居環境，促進可持續發展，而不是為了制定發展規模。這標誌著規劃立法基本理念的重大轉變：城市規劃立法的目的是要保障城市的健康發展（張松，2000），而不是像一些地方官員認為的城市規劃不幫助城市擴大規模，就是阻礙社會經濟發展。當前，以GDP增長為主的政績評價體系，集中在生產環節的財稅制度，地方財政對於預算外土地出讓收入的依賴加深，而政府在配置土地、信貸等要素資源的權利過大等等體制機制問題導致地方政府不顧客觀條件，擴張城市規模的欲望被放大，即所謂“圈地熱”。城市規劃往往被作為政府突破規模，實現擴張式發展的技術工具，結果間接地催熱了投資需求，導致土地要素配置不合理，“規模”也成了城鄉規劃工作走不出的困境。

新《城鄉規劃法》總結了現行體制下城市規劃面臨的壓力和挑戰，以及規劃實踐中走過的彎路，有針對性地補充和完善了城鄉規劃對空間資源合理配置與有效利用的統籌與調

控作用，以及法定地位<sup>15</sup>。在城鄉規劃的實施中，強調優先安排基礎設施和公共服務設施<sup>16</sup>。這些內容將有效地引導城鄉規劃工作向促進健康城鎮化的方向邁進，通過空間資源的合理配置，發揮對經濟關係和社會利益的調控功能，改變目前城鎮發展中存在的切不實際，大量消耗資源與能源，以及不重視消費性需求、不重視環境保護和公共安全等問題。

## 1.2 城鄉統籌：解決城鄉二元問題

存在大量結構性問題是發展中國家的一個典型特徵，在中國最突出的就是“城鄉二元結構”問題。長期以來，我國對資源和利益的調配是建立在重城輕鄉的基礎之上的，由此導致當今中國任何宏觀經濟政策的傳遞通道是不完整的，從而大大降低了宏觀調控的政策效率。以重慶為例，直轄十年以來，鄉村地區得不到足夠的資金投入，固定資產投資占比從 25.9% 下降到了 6.5%（表 1），城鄉收入比擴大到 4:1。多年來，因《城市規劃法》沒覆蓋鄉鎮農村，規劃管理體制上的城鄉分隔使得城市發展與農村地區脫節，農村地區成為規劃盲點，結果也成為了違法建設較為嚴重的地區，規劃部門在執法時受到很多限制。

表 1 重慶市主要年份城鄉社會經濟發展指標比較

	1997 年	2000 年	2006 年
二三產業增加值與一產業增加值之比	3.4	4.6	7.2
城鄉就業人數比	0.3	0.3	0.7
城鄉人均收入比	3.1	3.3	4
城鄉恩格爾係數比	0.71	0.79	0.7
城鄉人均消費性支出比	3.5	3.9	4.3
城鎮固定資產投資比重 (%)	74.1	81	93.5
鄉村固定資產投資比重 (%)	25.9	19	6.5

資料來源：《1998 年重慶統計年鑒》、《2001 年重慶統計年鑒》、《2006 年重慶統計年鑒》

新《城鄉規劃法》將鄉規劃、村莊規劃納入了城鄉規劃體系中，把城市和鄉村的建設看作是系統化工程，不僅關注城市規劃，而且在條件允許的地區，要求對農村的長遠發展做出合理的佈局，實現城鄉空間資源的統一安排，促進各種要素的優化配置和合理流動，避免基礎設施建設上的重複浪費，增加了農村獲得資源投入的機會，從而保證了城市和農村具有平等的發展機會，為實現城鄉空間協調發展提供了政策保障。

<sup>14</sup>現行《城市規劃法》的第一條是“為了確定城市的規模和發展方向，實現城市的經濟和社會發展目標，合理地制定城市規劃和進行城市建設，適應社會主義現代化建設的需要，制定本法”。

<sup>15</sup>《中華人民共和國城鄉規劃法》第四條規定：制定和實施城鄉規劃，應當遵循城鄉統籌、合理佈局、節約土地、集約發展和先規劃後建設的原則，改善生態環境，促進資源、能源節約和綜合利用，保護耕地等自然資源和歷史文化遺產，保持地方特色、民族特色和傳統風貌，防止污染和其他公害，並符合區域人口發展、國防建設、防災減災和公共衛生、公共安全的需要。

<sup>16</sup>《中華人民共和國城鄉規劃法》第二十九條規定：城市的建設和發展，應當優先安排基礎設施及公共服務設施的建設，妥善處理新區開發與舊區改建的關係，統籌兼顧進城務工人員生活和周邊農村經濟社會發展、村民生產與生活的需要。

《城鄉規劃法》明確了“在城市總體規劃、鎮總體規劃確定的建設用地範圍以外，不得設立各類開發區和城市新區”，“在鄉、村莊規劃區內進行鄉鎮企業、鄉村公共設施和公益事業建設的，建設單位或者個人應當向鄉、鎮人民政府提出申請，要領取鄉村建設規劃許可證，並不得佔用農用地……”。這樣就用法律的手段防止了政府官員利用城鄉二元土地制度，搶先儲備土地，損害農民的利益。

### 1.3 規劃實施：增強宏觀調控的法律手段

現行《城市規劃法》在內容上對規劃編制作了較多規定，而對規劃管理、操作程式、監督檢查、法律責任規定得較少、較籠統<sup>17</sup>。新《城鄉規劃法》強調了城鄉規劃的法律地位和作用，指出：“任何單位和個人都應當遵守依法批准並公佈的城鄉規劃，服從規劃管理”。新法強調了規劃的穩定性和法定性。針對“領導一換，規劃重來”，隨意、頻繁變更規劃的問題，新法補充了“城鄉規劃的修改”專章，嚴格了規劃修改制度和程式，經依法批准的規劃，禁止擅自修改，只有符合法律規定的特定情況，才可以修改。

由於編制和實施規劃的職能主要集中在地方政府，現行《城市規劃法》比較注重對行政權力和管理手段的維護，而對政府部門實施監督制約和對公民、法人以及社會組織的保護性規定薄弱。爲了維護城鄉規劃的嚴肅性，新法加強了對行政權力的監督制約，強化了立法機關（即人民代表大會）、上級政府、社會公眾對規劃工作這一行政權力的有效監督作用，將公眾參與、多部門參與、總體規劃的定期評估及向人大報告作爲法定程式，形成開放式的規劃決策體系，從而對違法行爲形成法定的糾正能力。新法還強化了法律責任，包括追究政府和行政人員的責任，追究城鄉規劃編制單位的責任，追究違法建設行爲的責任<sup>2</sup>。

## 2· 融合還是分離？中國的三大空間戰略規劃

在中國，除城鄉規劃外，具有空間戰略屬性的規劃還有由發展與改革委員會主導編制的國民經濟與社會發展五年規劃、由國土資源部主導編制的土地利用總體規劃。目前這兩類規劃也在向著加強宏觀調控屬性的方向進行轉變。

2003年，中國國家計劃委員會改名爲國家發展與改革委員會，之後，五年計劃更名爲發展規劃，除指標預測外，重新開始強調空間規劃（牛慧恩，2004）。目前，國家發展與改革委員會正在編制全國的主體功能區劃<sup>18</sup>，主體功能區劃被定位爲其他規劃的依據，具有指導和約束作用，由於主體功能區劃的編制，國民經濟與社會發展規劃將不再是僅僅制定經濟社會發展目標和安排專案，還將強化對於國土開發空間的控制和指導（國務院辦公廳，2006）。

與此同時，全國和各省市的土地利用總體規劃也在緊張修編中，嚴守18億耕地是本次土地利用規劃的底線。由於土地利用規劃的所有指標都是自上而下分配的，因此土地政策

<sup>17</sup> “認真貫徹《城鄉規劃法》開創城鄉規劃工作新局面——建設部城鄉規劃司司長唐凱答《中國建設報》記者問” [http://www.gov.cn/zwhd/2007-11/23/content\\_813276.htm](http://www.gov.cn/zwhd/2007-11/23/content_813276.htm)

<sup>18</sup>所謂主體功能區劃規劃，就是要根據資源環境承載能力、現有開發密度和發展潛力，統籌考慮未來我國人口分佈、經濟佈局、國土利用和城鎮化格局，將國土空間劃分爲優化開發、重點開發、限制開發和禁止開發四類主體功能區，並按照主體功能定位調整完善區域政策和績效評價，規範空間開發秩序，形成合理的空間開發結構，實現人口、經濟、資源環境以及城鄉、區域協調發展（國辦法（2006）85號）。

對宏觀經濟的調控作用最為直接和剛性，規劃將在空間上落實基本農田，劃定建設用地等關鍵性資源。

三大戰略規劃的改革方向都是在不斷加強自上而下對空間資源的調控力度，希望規劃作為重要的國家政策，能夠干預影響宏觀經濟的長期增長方式，逐步扭轉結構性失衡的局面。但是在具體實施中，三大戰略規劃表現出矛盾與不足：

一是主體功能區劃的劃分理念和方法類似於城市規劃中劃分禁止建設區、控制建設區和適宜建設區，表面上全域覆蓋，實質上重城輕鄉，重工輕農；主體功能區劃中具有直接宏觀調控作用的配套政策尚未出臺，被劃為禁止和限制開發區的地區希望看到的財稅制度安排和績效評價改革還未落實，其效果如何，只能拭目以待；而現有的五年規劃在地方範疇內仍然體現的是地方政府發展的意旨，表現為對增長指標的追逐，對此，中央政府是缺乏約束力的。

二是土地利用總體規劃雖貫徹了自上而下的控制思路，特別是嚴格控制城鎮建設用地的思路，但由於城鄉土地二元制度障礙，加之不少地方對農村建設用地抱著無所作爲的態度，以至於在中國快速城鎮化的今天，農村人口在大量減少，農村建設用地卻出現了不減反增的現象。1996至2004年間，中國城市化水準從30.5%提高到41.8%，同期農村人口減少9380萬人，而農村居民點用地仍增加150萬畝；人均農村居民點用地呈現出穩增趨勢，從1996年193平方米/人，一直增加到2004年218平方米/人；農村宅基地的閒置粗略估計在10%~15%左右，農村住宅用地閒置面積接近於整個城鎮面積<sup>19</sup>。一方面是城鎮化加速發展，全國每年近1個百分點的增長，1000萬人口的增加；另一方面是城鄉二元土地制度的隔閡，國家對土地的宏觀調控在農村化爲無形，現行土地法律、政策無法支撐土地資源在城鄉之間的正常流動。兩種不同的土地所有制是造成城鄉規劃管理出現巨大差異的制度根源（鄒兵，2003），城鄉空間資源的統籌也就無從談起。

三是目前建設部門牽頭開展的區域規劃，重點是城市、鎮、農村居民點等建設空間，即城鎮體系規劃（仇保興，2004），但城鎮體系規劃在空間利用方面難以定位和定量，實施效果不佳。在《城鄉規劃法》頒佈之前，一些沿海省市針對工業化和城鎮化加速發展中的城鄉空間無序問題，將城市規劃向整個區域空間拓展，開展了覆蓋全縣（市）域的總體規劃。但是，規劃無論在技術層面，管理體制，還是在組織編制和規劃審批上，都面臨重重困難（張偉，徐海賢，2005）。以深圳為例，深圳是全國最早實行城鄉一體化統一管理的城市之一，早在1996年的城市總體規劃中，深圳就實現了全域覆蓋，在管理體制上也曾經是規劃與國土部門合一，但即使如此對特區外農村集體用地的管理仍然遭遇很多阻力和困難（鄒兵，2003）。

不少人認為城市規劃就是規劃城市，不涉及城市以外的地區，認為城市規劃屬於專項規劃或部門規劃而非綜合規劃（牛慧恩，2004）。現行《城市規劃法》中確定的城市規劃區概念明確了城市規劃部門權力有效的地域界線，表面上保證了規劃權力的實施，但內涵有很多的不確定性。它在土地有償使用制度下，缺乏土地權利方面的法律基礎，有一定的隨意性，結果是市場經濟下的大量土地使用和建設行為游離於城市規劃區外（張兵，2000），造成環境保護和資源浪費。

19 國土資源部信息中心（資源網）郭文華：“農村蔓延值得警懼”，（2006-11-15）

[http://www.lrn.cn/bookscollection/magazines/trendsandreference/2006trendsandreference/2006\\_6/200611/t20061115\\_2008.htm](http://www.lrn.cn/bookscollection/magazines/trendsandreference/2006trendsandreference/2006_6/200611/t20061115_2008.htm)

雖然新《城鄉規劃法》中提出了城鄉空間資源合理配置的目標，但仍然表現出對三大戰略規劃並存和部門職能許可權的妥協。在新法頒佈之前，規劃界表現出即寄望於此法能使規劃權力的行使能更符合發展的要求，但也深知規劃體制改革的風險性和漸進性，曾有專家評價現行《城市規劃法》帶有深刻的部門法烙印（張兵，2000），但新法也很難在短期內消除這種烙印，與英國《城鄉規劃法》的“覆蓋城鄉”相比，同名不同質。新法強調了城鄉規劃管理的許可權在規劃區內，也即是城鎮村的建設區範圍內，新法還強調了“國民經濟與社會發展規劃是城鄉規劃的依據，城鄉規劃要加強與土地利用總體規劃的銜接”，可是國民經濟與社會發展是五年規劃期，城鄉規劃是二十年規劃期，依據不全。

三大戰略規劃的矛盾與不足表面上是三大職能部門：建設部、發改委、國土資源部在職能和管轄範圍上的局限和衝突，是三大規劃的審批部門、層級、法定地位和實施年限的不同，但其實質是規劃缺乏協調和實施不力，缺乏統一的，綜合性的，思路一致，全域覆蓋，真正體現科學發展要求的空間戰略規劃及規劃體系安排，並以此作為空間開發建設的行動綱領。在基層則具體表現為規劃打架，各種規劃之間相互矛盾、彼此衝突，令地方政府無所適從，規劃難以得到執行和實施（牛慧恩，2004）。空間規劃體系的多元化導致城鄉統籌規劃難以落實，規劃作為公共政策的宏觀調控作用也會因此大打折扣。基於這種思路分析，城鄉統籌規劃改革的思路應當是整合空間各種類型與層次的規劃，形成對整個城鄉空間統籌規劃的發展格局（張偉，徐海賢，2005）。是讓三大戰略規劃走向融合，還是保持分散的狀態？部分地區的回答是用規劃和實踐來推動“三規合一”。

### 3· 區縣域“三規合一”的改革實踐

雖然矛盾重重，但實施城鄉一體化規劃管理是城鄉發展的大勢所趨（鄒兵，2003），目前“三規合一”的思路在不同地區，因為推動的主體不同，存在較大的差異。

#### 3.1 國家部委推動的改革

國家發改委曾於2004年在江蘇蘇州市、福建安溪縣、廣西欽州市、四川宜賓市、浙江寧波市和遼寧莊河市等六個地市縣試點“三規合一”，但由於缺乏體制保障，寄希望於地方一把手的全力支援，以及另外兩個部門及規劃的障礙，使得改革難以推進<sup>20</sup>，原計劃試點後在全國推廣的想法也無疾而終。試點的失敗說明了單個部門很難充當規劃改革的探路人。

在新一輪土地總體規劃修編工作中，國土資源部於2006開始在天津、江蘇、山東、湖北、四川進行城鎮建設用地增加與農村建設用地減少相掛鉤的試點工作<sup>21</sup>（田春華，2006）。在此之前，2000年國土資源部就出臺了檔允許在小城鎮試點該項政策<sup>22</sup>。目前的改革是從土地要素入手，局部突破城鄉土地不能互相流轉的格局，掛鉤政策實施中的主要阻力包括：村鎮體系規劃滯後，農村居民點整理的觀念障礙，缺乏具體的法規支援和連續的政策保證，以及資金瓶頸（張宇，歐名豪等，2006）。土地改革雖不是“三規合一”，但是城鄉用地的統一規劃和管理、城鄉土地流轉制度的建立是“三規合一”的基礎。目前

<sup>20</sup> 21世紀經濟報導：“發改委醞釀市縣規劃改革“三規融合”重大突破”（2004-8-8）

<sup>21</sup> “城鎮建設用地增加與農村建設用地減少掛鉤試點”是指依據土地利用總體規劃，將若干擬複墾為耕地的農村建設用地地塊和擬用於城鎮建設的地塊共同組成建新拆舊項目區，最終實現項目區內建設用地總量不增加，耕地面積不減少、品質不降低，用地佈局更合理。

<sup>22</sup> 國土資源部（國土資發[2000]337號）《關於加強土地管理促進小城鎮健康發展的通知》

“總量控制，封閉管理”等要求都表現出這一改革是謹小慎微的，其背後隱藏的是改革的漸進性和複雜性。

### 3.2 地方政府推動的改革

由於區縣是我國行政單元中功能完整但相對較小的地域，便於打破部門管理的弊端實行統籌規劃（何克東，林雅楠，2006），因此從區縣著手，在地方政府的主導下進行“三規合一”的規劃和實施在江蘇、浙江等省市逐步找到了出路。高度發達的區域經濟產生了城鄉一體化發展的內在需求與動力，也積累了統籌城鄉發展的經濟實力與底氣。以全國百強縣——江蘇昆山為例，昆山提出了“分片區發展、市域全覆蓋、大區域聯動”三個理念，統一規劃全市 927 平方公里<sup>23</sup>。政府通過規劃及其實施配套政策這只“有形之手”，與市場配置資源這只“無形之手”相結合，掃除體制障礙，實現了“在空間形態上城鄉有別，使城市更像城市，農村更像農村；在社會形態上城鄉一體，讓廣大農村充分享受到現代城市文明”。昆山市通過推進農村“三集中”<sup>24</sup>，使農村面貌、農業發展水準、農村居民收入與保障水準發生了根本性地變化。

今年 6 月，國家發改委批准處於西部地區的重慶市和成都市作為全國統籌城鄉綜合配套改革實驗區。事實上近幾年成都一直在探索城鄉一體化規劃和非城市建設用地的規劃管理工作，他們先後完成了農村居民點、重點鎮、新城、中心城、非建設用地等規劃<sup>25</sup>，然後自下而上地開始著手編制“遠景規劃”、“全域規劃”等。與此同時，在保證耕地不減少的情況下，摸索小田變大田的農業規模經營，以及城鎮建設用地增加與農村建設用地減少相掛鉤的土地流轉模式。但這樣的改革存在著對現行《中華人民共和國土地管理法》的違背，現行法律規定：控制建設用地總量，限制農用地轉為建設用地<sup>26</sup>；城鎮建設用地必須申請使用國有土地，農民集體所有的土地的使用權不得出讓、轉讓或者出租用於非農業建設<sup>27</sup>。

### 3.3 艱難前進的重慶規劃改革實踐

重慶市於今年率先明確提出“區縣三規合一，市級三規協調”的規劃改革思路，並以此為目標開始進行規劃編制體系、體制和實施的改革探索：按一級政府一級事權的方式，建立“三層次、兩階段”的規劃編制體系：包括市域城鄉總體規劃、區縣城鄉總體規劃、

<sup>23</sup>重慶市規劃局“敢於創新，勇於盡責——昆山規劃統籌城鄉發展調研報告”（2007 年 10 月）

<sup>24</sup>鄉鎮工業向園區集中、農民居住向新型社區集中、農業用地向適度規模經營集中。

<sup>25</sup>這種自下而上的辦法有點類似於英國區域規劃的起源。上世紀初，英國的區域規劃是由各種不同種類的專項區域規劃來起步的，例如交通、國家公園、工業區、永久性農田規劃等等（仇保興，2005）。

<sup>26</sup>《土地管理法》（2004 年 8 月 28 日實施）第四條規定：國家編制土地利用總體規劃，規定土地用途，將土地分為農用地、建設用地和未利用地。嚴格限制農用地轉為建設用地，控制建設用地總量，對耕地實行特殊保護。

<sup>27</sup>《土地管理法》（2004 年 8 月 28 日實施）第四十三條規定：任何單位和個人進行建設，需要使用土地的，必須依法申請使用國有土地；但是，興辦鄉鎮企業和村民建設住宅經依法批准使用本集體經濟組織農民集體所有的土地的，或者鄉（鎮）村公共設施和公益事業建設經依法批准使用農民集體所有的土地的除外；第六十三條規定：農民集體所有的土地的使用權不得出讓、轉讓或者出租用於非農業建設；但是，符合土地利用總體規劃並依法取得建設用地的企業，因破產、兼併等情形致使土地使用權依法發生轉移的除外。

鎮總體規劃三個層次，以及總體規劃和詳細規劃兩個階段，通過規劃編制和管理體系的完善，實現城鄉統籌規劃的目標<sup>28</sup>。

重慶的改革是首先以區縣為單元，從編制區縣城鄉總體規劃入手，以此來統一認識和思路。規劃試圖以空間資源的優化配置為主線，以城鄉統籌的空間發展來落實和促進區域社會經濟發展目標的實現。規劃將耕地保護、環境、資源等作為發展的約束條件，試圖合理安排城鄉建設空間、農業發展空間、生態保育和特定功能的管制空間，並指導和約束空間發展的時序性和方向性。

在探索“三規合一”的途徑中，目前規劃面臨著重重困難，解決方案的理想化與現實世界存在矛盾，還有諸多的問題等待破解。這其中有戰略層面的問題：發達地區走過的是以大量消耗物質資源為代價的發展道路，欠發達地區在勞動力資源減少（農村最為典型），資本資源緊缺，甚至自然資源被壟斷的條件下，不能重複這條道路，社會經濟發展目標應該如何落實？雖然我們認識到空間資源的安排不應該僅剩下幾條控制底線<sup>29</sup>，應該是促進資源的優化配置，但卻徘徊在理論與現實之間。另外還有操作層面的問題：發改委、土地、規劃三大行政主管部門的事權難以協調和突破，區縣追求不切實際的發展目標和擴張思路，現行土地政策存在大量的制度性障礙。在目前的發展階段，我們是否有足夠的能力實現統籌規劃的實施；誰願意為規劃改革承擔風險，是地方政府還是主管部門？

#### 4· 結語

《城鄉規劃法》明確了城鄉規劃是政府指導和調控城鄉建設和發展的基本手段之一，也是政府履行經濟調節、市場監管、社會管理和公共服務職責的重要依據。城鄉規劃已經成為中國宏觀調控的重要手段之一，將對調整經濟運行的結構性問題產生積極的影響作用。

城市與鄉村的和諧發展一直是規劃嚮往和追求的最高境界（張兵，2000），尊重農民、尊重歷史、尊重是城鄉統籌規劃工作的重要原則（仇保興，2005）。目前的改革有喜有憂，希望在一個規劃中將城鄉建設的方方面面統一起來，阻力相當大。對於城鄉統籌，《城鄉規劃法》提出了普適性的原則，而把操作性的具體規定留給了地方政府去補充完善，這種改革思路在保證國家層面穩定的基礎上，為地方留下了操作的空間（鄒兵，2003）。正如自下而上的改革探索是中國式改革的特色一樣，地方實踐會推動中國三大空間規劃主管部門從三者協調發展的角度考慮規劃的出路，理順空間規劃的管理體制，最終使規劃獲得必要的制度基礎和體制保障。

#### 5. 參考文獻

- 國務院辦公廳（2006），國務院辦公廳關於開展全國主體功能區劃規劃編制工作的通知. 國辦法（2006）85號.
- 何克東，林雅楠（2006），規劃體制改革背景下的各規劃關係芻議. *經濟研究*（8）：49-50.
- 梁鶴年（2004），西方規劃思路與體制對修改中國規劃法的參考. *城市規劃* 28（7）：37-42.
- 牛慧恩（2004），國土規劃、區域規劃、城市規劃——論三者關係及其協調發展. *城市規劃* 28（11）：42-46.

<sup>28</sup> 《重慶市規劃管理條例》（修訂初稿）

<sup>29</sup> 城市藍線、黃線、綠線、紫線管理規定，分別保護和控制地表水體、城市基礎設施用地、各類城市綠地、歷史文化街區和歷史建築用地。

- 仇保興（2004），論五個統籌與城鎮體系規劃.*城市規劃*28(1)：8-16.
- 仇保興（2005），城鄉統籌規劃的原則、方法和途徑——在城鄉統籌規劃高層論壇上的講話.*城市規劃*29（10）：9-13.
- 田春華（2006），我部確定首批掛鉤試點省市天津江蘇山東湖北四川將進行城鎮建設用地增加與農村建設用地減少相掛鉤.*中國國土資源報*（2006-5-9）第001版.
- 王唯山（2003），對修訂《城市規劃法》有若干思考.*規劃師*16（12）：44-47.
- 吳志強，唐子來（1998），論城市規劃法系在市場經濟條件下的演進.*城市規劃*22（3）：11-19.
- 張兵（2000），漸進的規劃制度改革面臨的出路——關於制定《城鄉規劃法》的討論.*城市規劃*24（10）：8-13.
- 張松（2000），《城市規劃法》修改的理論問題初探.*城市規劃*24（3）：38-40.
- 張偉，徐海賢（2005），縣（市）域城鄉統籌規劃的實施方案探討.*城市規劃*29（11）：75-79.
- 張宇，歐名豪等（2006），鉤，該怎麼掛——對城鎮建設用地增加與農村建設用地減少相掛鉤政策的思考.*中國土地*（3）：23-24.
- 鄒兵（2003），實施城鄉一體化管理面臨的挑戰及對策——論《城鄉規劃法》出臺可能面對的若干問題.*城市規劃*27（8）：64-67.

## **Interpretation of Macro-control Effects of China's Town and Country Planning Law: Implications for Integrated Planning Practice in Chongqing**

**Zheng Yi**

*Chongqing Planning and Design Institute, Chongqing, China*

### **Abstract**

As a result of continuous revision of the City Planning Law and Regulations on the Administration of Village and Town Planning and Construction, China's Town and Country Planning Law (hereinafter referred as CTPL) will soon be enforced after a decade of incubation. The CTPL shifts planning emphasis from technical perspectives to public policy considerations. In addition, it clarifies that planning does not only serve as a basic tool to regulate construction and development in urban and rural areas, but also take on a significant role in the fulfillment of government functions, including economic adjustment, market supervision, social management, and public service. In other words, planning of towns and countries is gaining its role as an approach for macro-control.

Present macro economic control in China features two key issues, namely, land and bank credit. Understandably, most land problems are related to urban and rural development. For example, environment and resource capacity considerations often



are ignored in selecting and locating industries; land development goes out of control; un-coordinated and thus often redundant construction of regional infrastructure is happening everywhere, leading to wasteful consumption of resources. The basic tools for the central government in macro-economic control comprise enforcing market order, institutional reforms, and administrative management.

As an administrative measure featuring integration, co-ordination, and comprehensive adjustment, town and country planning takes a fundamental role in guiding and improving sustainability of urban and rural development. Through the guidance and control exerted on coherent configuration and effective utilization of various spatial resources, town and country planning fulfills its function of integrating and adjusting rural and urban development spaces.

Yet, a wide range of spatial planning institutions exist in China besides town and country planning. The Plan for Economic and Social Development (PNESCD), for example, is updated every five years by the Development and Reform Commissions (DRCs) at the national, provincial, and county levels. Land Use Planning, which is particularly spatial in nature, is practiced by the land and resource administration system. These two planning institutions are also shifting to macro-control perspectives. The Major Function Oriented Zoning, which is under formulation by the National DRC, is a good example. Similarly, the PNESCD is strengthening in guiding and controlling land development space, besides its traditional functions of formulating objectives and measures of economic and social development. The National Land Use Planning serves as another good example. Taking the protection of 1800 million *mus* of farmland as the baseline, the National Land Use Planning is ascertaining critical land resources, such as prime farmland, onto ground. At the national level, the objectives and intentions of these three major spatial planning are converging. However, contradictions and conflicts are arising in the implementation stage at various locales.

Chongqing's Master Town and Country Planning, being the first in the nation, has been approved by the central government in June, 2007. At the same time, Chongqing and Chengdu were assigned as pilot regions of national integrated urban and rural reform. Within such a context, a reform of spatial planning institutions is taking place in Chongqing. The main idea is to integrate these three spatial plans into just one at the municipality level, and coordinate them at the county level. Accordingly, the planning system and its implementation are under review for possible reforms. Consequently, several master plans of counties and districts of Chongqing have been selected as pilot cases of planning reforms.

The undergoing master plans, which take the optimization of configuration of spatial resources as the key issue, aim to support and achieve regional economic and social development objectives with an integrated approach of urban and rural spatial development. Acknowledging farmland protection, environment, resources, *inter alia*,

as constrains, these plans intend to rationally configure urban and rural development space, agricultural development space, ecological conservation space, and other spaces. Also expected from these plans are both guidance and restraint on the direction and timing of spatial development.

As pilots of integrated town and country planning, these under-formulating master plans encountered a wide range of difficulties. To bridge the ideal proposals and the reality stands is the most outstanding one. Another one is to achieve social and economic development without substantial consumption of land. Furthermore, the institutional impedance exerted by present land policies on the construction of rural settlements and agricultural development, the uncertainness of land reform, and the difficulties in delineating the boundaries of urban and rural construction resulted from the complexities of urbanization in west China, among others, are remaining challenges.

# **Regulating Urban Transformation in China: A Relational View on Hong Kong and Guangzhou**

**Bart WISSINK**

Department of Human Geography and Urban Planning,  
Utrecht University,  
Utrecht, The Netherlands  
Tel: +31622941655  
Fax: +31302532037  
Email: b.wissink@geo.uu.nl

## **Abstract**

In the wake of rapid urban transformation around the world, spatial planning receives ample attention as a means to regulate urban form. This paper questions the possibilities of planning to do so. It argues that planning is not the only practice that determines urban form. Instead, urban form should be perceived as the result of a broad range of goal oriented public and private actors, structured by their institutional settings. Furthermore, physical objects structure interaction as well. The paper applies this relational argument to two Chinese cities with a profoundly different urban morphology, political economy and urban history: compact Hong Kong and sprawling Guangzhou. It interprets the variations in urban form as variations in the associations with which they emerged. Hong Kong's concentrated urban form relates to and supports a dominant association of empty mountains, country parks, podium buildings, real estate developers, Hong Kong government bureaus, urban residents, and indigenous villagers. Within this association, Hong Kong planners and plans are successful, but only so because their goals and strategies fit in. This also limits the potential of planning for change. The situation in Guangzhou is very different. Here, real estate developers, government officials, municipalities, foreign investors and suburbanites associate with gated enclaves, development zones, cars, and motorways. Planning is not part of this new dominant association, and thus has limited influence. This relational interpretation of urban development and landscapes in Hong Kong and Guangzhou results in conclusions the 'narrative of loss' on urban transformation and on the possibilities to intervene through urban planning.

## **1. Chinese Cities in a New Geography**

With the emergence of the post-industrial or network society, socio-cultural and economic practices the world over are changing rapidly. In studying these changes, authors like Castells, Knorr-Cetina, Giddens, and Beck do highlight different driving forces, but seem to agree on the most important aspects: new technologies, globalization and individualization. These also have far-reaching spatial implications: the changing spatial characteristics of socio-cultural and economic practices result in a 'new geography' (Sassen, 1996; Kotkin, 2000; Asbeek Brusse and Wissink, 2002). In this new geography, cities are transforming dramatically. Most strikingly, accelerating urbanization results in a staggering growth of cities (Davis, 2006: 1-19). According to the United Nations Department of Economic and Social Affairs (2002) there are now

400 cities with a population of more than one million inhabitants, compared to 86 in 1950. Half of earth's population lives in cities, and the absolute number of rural inhabitants is going down. The growth of megacities and seemingly endless urban fields is especially striking. Today, even the amount of conurbations with more than 20 million inhabitants is growing. Most of these megalopolises are located in Third World countries, of which many in Asia. And nowhere urbanization is as radical as in China (Pannell, 2002). Here an extended period of deliberate Maoist under urbanization has now been exchanged by an aggressively planned urban development. The result is a rural to urban transition without historical precedents. China alone added more city-dwellers in the 1980s than did all of Europe (including Russia) in the nineteenth century (Financial Times, 27 July 2004, cited by Davis, 2006: 2). And although Beijing provoked this transition, the results now put the problem solving capacities of all levels of Chinese government to the test.

### **1.1 The 'narrative of loss' in urban studies literature**

Urban Studies literature pays due attention to the impacts of the spatial restructuring of city regions. It does acknowledge that spatial restructuring accommodates economic and social-cultural globalization, but at the same time the effects of spatial changes on social structures are rendered problematic.<sup>30</sup> For instance, it is stressed that urbanization generates the transition of a variety of diverse rural lifestyles to a single urban one, thus disturbing trusted social patterns and age-old communities. From the start sociological and urban research paid central attention to this 'loss of community', but the increased speed of urbanization has caused a renewed attention for this theme. Furthermore, it is stressed that with rapid urbanization and the resulting urban sprawl cities now engulf rural areas thus forcing former rural lifestyles to change. Villagers not only migrate to the city, but increasingly quickly, the city also migrates to the villages, thus causing more communities to change (Davis, 2006). And in this 'desakota' landscape, it is very hard to make a clear difference between rural and urban areas (McGee, 1987). But urban studies literature not only focuses on the changing size of cities. It also studies the effects of their changing internal structure. With the introduction of new transportation technologies and privatized infrastructures, the traditional core-periphery model of industrial cities is replaced by an 'archipelago of enclaves' (Hajer and Reijndorp, 2001) which results from processes of 'splintering urbanism' (Graham and Marvin, 2002).

The urban studies literature is worried about these changes. Well-read authors like Davis, Sorkin, Sennett, Castells, Graham and Marvin, and Zukin emphasize that due to the splintering of physical space, also social life in the post-industrial city becomes 'fragmented', 'splintered' or 'partitioned'. They stress that the rich are disconnecting themselves spatially from the poor, and are retreating in the pseudo public spaces of shopping malls, golf clubs and gated communities, thus undermining solidarity. The public space of the enlightenment project – a generally accessible, free and safe space that emerged in the context of the nation state – is increasingly replaced by collective but exclusive spaces that are selectively connected. Furthermore, there is a growing fear for the disappearance of old public spaces, and with them the changes for different social groups to meet. Since splintering is said to hinder face-to-face interactions between groups – the sort of interaction that supposedly was constitutive

---

<sup>30</sup> The relationships between spatial restructuring and social life are the object of the *Respace* project on 'the politics of spatial resegmentation' in which five Asian metropolitan regions are studied: Tokyo, Bangkok, Hong Kong, Guangzhou, and Mumbai ([www.respace.org](http://www.respace.org)).

of the emergence of modern society in Europe in the first place – it is easily perceived as a threat to community and democracy.

These worries about the social integration of urban communities reinforce the traditional attention for the loss of community in urban studies and sociological literature. It results in a dominant negative framing of urban restructuring, which Crawford (1998: 23) describes as a ‘narrative of loss’. This narrative “contrasts the current debasement of public space with golden ages and golden sites – the Greek agora, the coffeehouses of early modern Paris and London, the Italian piazza, the town square. The narrative nostalgically posits these as once vital sites of democracy where, allegedly, cohesive public discourse thrived, and inevitably culminates in the contemporary crisis of public life and public space, a crisis that puts at risk the very ideas and institutions of democracy itself”. Others like Arefi (1999), Banarjee (2001), and Marcuse and Van Kempen (2002) echo this observation of the negative framing of urban restructuring. Interestingly, in an analysis of the Middle Eastern or Arab city, Elsheshtawy (2004: 3-7) signals a similar negative framing.

### **1.2 The new form of the Chinese city**

The spatial changes of Chinese city regions seem to fit in with this narrative of loss remarkably easy. Land-use specialization is one of the main characteristics since Deng Xiaoping announced major economic reforms at the end of the 1970s (Gaubatz, 1999). Before that, the main building blocks of the ‘Maoist’ Chinese cities had been the work-units or ‘danwei’. These were characterized by a high degree of self-sufficiency and social integration. They not only provided work, but also housing, health care, food and other basic services. As a result, the Maoist city consisted of an endless collection of danwei with low levels of functional specialization and internally integrated networks. Beyond their borders, networks were not dense at all and infrastructures were relatively underdeveloped.

The urban structure of the post-Maoist city is starting to be remarkably different. Following economic reforms and accompanying changes in urban life styles and social organization, new urban forms are developing. Changes in housing tenure and consumption, the introduction of commercial enterprises and of foreign investment, and industrial growth result in district specialization and increased mobility (Wu, 1998). With the separation of housing from the workplace and from places of consumption, the integrated worlds of the danwei are being replaced by mono-functional and mono-cultural enclaves: the gated housing estate, the commercial district, the shopping mall, and the development zone. And the need for travel between these mono-functional units has grown dramatically, resulting in an alarming growth of car- and motorcycle-ownership, threatening to gridlock urban and regional roads.

### **1.3 Can planning help?**

When framed through the ‘narrative of loss’, the urban development of the Chinese city seems to pose serious questions for China’s urban future. Spatial fragmentation emerges as a general worldwide outcome of the goal-oriented agency of elites that are applied in various urban context and all lead to the same results: fragmentation. Therefore, this framing brings in view the threat that spatial resegmentation will undermine the social coherence of the Chinese society. And although so far in the Chinese context there hasn’t been much attention for the effects of the internal

splintering of urbanism, the continuous sprawl of cities is observed in alarm. In reaction, just like in Europe at the start of the twentieth century, more than once, urban planning is put forward as a means to prevent negative effects; either by preventing urban sprawl and promoting compact urbanism; or even by countering new forms of spatial inequality that result from the internal fragmentation of cities.

This paper doesn't argue against compact urbanization or spatial equality as goals for Chinese urbanization. But it does question the theoretical underpinnings of *general* goal oriented planning strategies as means in such an endeavour. From an relational point of view it stresses that, apart from the influences of globalization, the specific urban form of city regions is as much determined by the institutional settings and actor setups of national and local contexts. Furthermore, the existing physical landscapes of city regions structure the development of urban form as well. And these 'local' determinants of urban form can vary remarkably, thus necessitating local strategies for intervention. In short, in reaction to the 'narrative of loss', there is not one general process of urban segmentation that is similar everywhere around the world. Variations in political economies, in the characteristics of the organization of building provisions, and in physical landscapes, profoundly influence the local outcomes of worldwide restructuring and general elite strategies or preferences. Therefore, policies to influence urban form should be based on an understanding of the interaction of global and local driving forces.

This paper wants to contribute to such an understanding. For that reason, it makes a comparison between Hong Kong and Guangzhou: two Chinese cities with a profoundly different urban morphology, political economy and urban history. How can the differences in urban morphology be explained? What potential developments for the future can be expected? How successful are planning strategies in these contexts? And which possibilities for government intervention emerge? To answer these questions, the next paragraph will first outline an adequate framework for the analysis and understanding of the urban form of specific cities. Then the urban form of Guangzhou and Hong Kong will be introduced in paragraph three. Paragraphs four and five will analyse the sprawling form of Guangzhou and the concentrated urban form of Hong Kong respectively. Paragraph six then draws conclusions on the causes of the different forms of both cities and on the consequences for intervention.

## **2. Actors, Institutions, and Things**

In turning our attention to the differences between Guangzhou and Hong Kong, we have to know 'how' exactly to study the role of spatial planning in the emergence of urban form in both cities. We already established that such a framework has to imply goal oriented actors as well as the institutional settings in which these operate. Also we ascertained that we have to include the characteristics of physical landscapes as determinants of the emerging urban form. But how are these elements related? And how can the role of urban planning be established? In answering these questions we will first make a difference between supply (production) and demand (consumption) perspectives on urban form and we will show that the narrative of loss wrongfully stresses consumption over production. Following, we will show that urban form as a product emerges together with groups as goal oriented actors and institutions as structuring properties. Thereafter, we will show that physical objects are also implied in this mutual constitution of society and space. Thus, the attention will be focussed

on associations of actors and things in settings. Then we will position urban planning within those associations and we will translate this theoretical position into a research framework.

### **2.1 Urban form as product**

The road towards explanations of urban form is full of conceptual problems. First of all, the concept of urban form itself is not clear (Bourne, 1982; Wu, 1995: 16-19; Lefebvre, 1996). This obscurity is the result of the existence of various perspectives – neoclassical economics, urban ecology, and institutional analysis – from which urban form is studied. In general, these perspectives all focus on the make up of the built environment. For instance, Bourne (1982: 41) enumerates a whole list of criteria for urban spatial structure, subdivided over context factors (like timing and functional character), macro form (like scale, shape, networks), internal form and function (like density, homogeneity, concentricity, connectivity), and organization and behaviour (like goal orientation and organizing principles). His full list already shows the multi faceted character of the topic under study.

Especially up to the 1980s, there has been a variety of studies focussing in different ways on the development of the urban form, urban spatial structure, spatial pattern of the internal structure of the industrial city and post-industrial city. This attention has resulted in numerous books (Chapin & Kaiser, 1979; Bourne, 1982; Lake, 1983; Hillier and Hanson, 1984; Whitehand and Larkham, 1992; Wu 1995; Christof, 1999; Conzen and Conzen, 2004). Also, already in 1974 the *International Seminar on Urban Form* was established, which publishes its own specialized magazine *Urban Morphology*. At the same time, attention is scattered over disciplines like architecture and geography and within these disciplines various independent lines of research exist: for instance the topomorphologists and space syntax within architecture, the Conzenian tradition and spatial analysis within geography (Whitehand, 2001). And although attention for urban form waned over the 1980s with the growing attention for actor-perspectives and the diminishing authority of structural functional perspectives, over the last decade it re-emerges due to the already mentioned worries over the social impacts of changing urban form of the informational, post-industrial, post-modern city.

Since definitions of urban form vary with the many perspectives on urban form that have been established, a meaningful conceptualization necessitates clarification of the perspective from which it is studied. Now, it is not the object of this paper to single out the full relationships between all these approaches. Therefore, for now some starting points suffice. First, there is confusion on the role of the natural characteristics of the landscapes ‘in’ which city regions emerge, in explanations of urban form. In naturalist explanations, natural elements are used to explain the patterns of urban settlements. For instance, the high densities of Hong Kong are explained from its mountainous landscape and the limited available space; and the spread out character of Tokyo or Guangzhou from the abundant space that was available on the extensive Kanto plains. Cities somehow seem to be perceived as natural entities that naturally come out of physical landscapes. These ‘natural’ explanations downplay the fact that these natural landscapes are mediated to create cityscapes, and that goal-oriented actors execute this mediation. Therefore, instead of natural explanations, ‘social’ explanations focus attention to social relations as a means to explain the urban form of cities.

Social explanations focussed on social processes without paying a lot of attention to the space of physical objects that was depicted as a result of social action. For instance, neo-classical perspectives on urban form especially stress demand as decisive factor (Lake, 1983). From this perspective, residential and other patterns are the end product of consumer choices within various markets. Then the emergence of gated communities is explained from the preferences of residents ('consumers') that want to live in these communities (as happens in the narrative of loss); the location of offices is explained from the location preferences of companies; the concentrated urbanization in Hong Kong is explained as result of a urban culture that guides the preferences of residents towards convenience and services resulting in condo living and downplaying preferences for suburban low density living; and so on. However, such demand-side explanations easily run into difficulties. For instance, the urban form between Guangzhou and Hong Kong varies extremely, but it seems unlikely that this solely results from variations in consumer preferences; after all the majority of Hong Kong inhabitants immigrated from China over the last decades. So maybe consumers in Hong Kong have different consumption preferences, but these differences have to be explained themselves. This shows that demand-oriented explanations presuppose transparent markets that directly follow demands. However, various obstacles prevent such direct reciprocity between demand and supply in the production of buildings and other spatial objects. Thus actors have to adjust their preferences to the existing situation. Institutional economics stresses that institutions structure consumer preferences and production alike. In similar vein, urban theory criticizes an over-emphasis on consumer demand as a driving force behind the production of space (Lake, 1983: ix-xxv). Attention has to be geared towards regimes of production of space.

## **2.2 Actors, institutions, and the production of urban form**

When focusing on urban form as a product, attention easily switches to the producers of spaces: real estate developers, infrastructure builders and governments to name a few. Actor-centred approaches thus discern the actors involved, and with a reference to their goals explain the interaction that results in urban form the aggregation of individual goals. Institutional approaches criticize such a reductionist explanation of outcomes from the preferences of individual actors (March and Olsen, 1989: 4-5). The 'rediscovery of institutions' leads to the conclusion that agency is structured by social relations and rules and resources that are embedded in practices. This 'new' institutionalism acknowledges the role of actors, but analyses their actions in the context of social practices that structure action. And this practice-theoretical approach stresses that even actors (and their norms, resources and interpretative schemes) are constituted in social practices (Schatzki, 1996: 1-18). Therefore, actors have to be analyzed in relation to structuring practices. When applied to space, this leads to the conclusion that 'men and women make space, but not under conditions of their own choosing', to elaborate on the well-known adagio of Marx. In terms of Giddens (1984), rules and resources structure the interaction of goal-oriented actors that are involved in the production of spaces. Therefore, an analysis of urban form as a product always also has to be an institutional analysis. This directs attention to issues



like property rights, planning regulations, real estate developers and the changing mix of powerful actors.<sup>31</sup>

During the advent of the new institutionalism in the 1980's, Paul DiMaggio (1988) stressed two potential shortcomings of institutional theory. First, institutional analysis tends to be inattentive to action. With the stress on the duality between action and structure in the production of urban form, practice theory is both institutional and at the same time stresses the importance of action. Therefore, such an actor-centred institutionalism meets this first criticism. As a second criticism, DiMaggio observed that institutional theories do not explain the emergence, endurance and change of institutions. Now, in the public domain, most practices are the result of explicit deliberation. Therefore, this second criticism can be met, by linking the actor-centred institutional analysis to a narrative analysis. The emergence and change of practices then can be explained from the narratives of the actors involved on the necessity of these practices. In similar vein, Hajer (1995) stresses that policy practices result from discourse institutionalization.

In conclusion, actors that produce urban form and institutional settings that structure their operations emerge mutually in social practices. Therefore, to understand the differences in the urban form of Guangzhou and Hong Kong, we have to understand the characteristics of this urban form; we have to focus on the producers of that urban form and their goals; we have to analyze the practices in which those producers are embedded and through which they emerged as actors with specific goals; we have to understand the simultaneous emergence of the properties that structure their actions; and we have to explain the emergence, endurance and change of these practices by analyzing the 'narratives' that supported their emergence.

### **2.3 The importance of things: Actor-Network-Theory**

Social explanations of urban form imply a departure of an absolute conception of space, in which space is regarded as a container that exists independently from objects and subjects 'in' space; space as stage on which social processes are played out and objects are distributed. In the 1980s, several authors like Giddens, Castells, Urry pointed out that this conception conceals how actors actively 'make' spaces (Gregory and Urry, 1985). Instead, in line with the above perspective, from relative or relational conception space is perceived as product of social relations (Urry, 1995: 1-30; Graham and Healey, 1999). Recent publications especially highlight the symbolic production of space. 'Representations' of space differ, and these differences mirror variations in the positions of actors and related identities, resources and goals. A second – although related – perspective on space as a product regards physical space itself as product (Low, 1996; Asbeek Brusse and Wissink, 2002; Yurcenar, 2006: 33-36). Physical urban form of city regions is an expression of social relations and power distribution. Such a perspective is employed in two ways. First, it is used historically. For instance, the differences between the urban form of the Medieval, the industrial and the post-industrial city result from changing social relations (Soja, 2000: 1-144). Second, the perspective of physical space as product can be used to analyze differences in the urban form of different city regions. For instance, the differences between the open European city with its public squares, and the closed and inward

---

<sup>31</sup> Terhorst and Van der Ven (1997) for instance show that differences in the fragmented urban form of Brussels and the relatively integrated urban form of Amsterdam can be explained by differences in suffrage, electoral system and representative democracy in the Netherlands en Belgium.

looking private collective spaces of Arab cities result from varying gender relations (Yurcenar, 2006: 33-36).

Although social explanations of urban form thus redress the shortcomings of absolute conceptions of space, at the same time they are ambiguous about the role of physical objects in the development of urban form: social aspects like acting actors or structuring institutions are the sole explanations. Thus the criticism on naturalist explanations resulted in an objectless 'social' explanation of urban form. Although in a different context, this state of affairs has been criticized by Bruno Latour. While focussing on the explanation of scientific theories and technologies, he shows how 'things' actively influence the emergence of theories and technologies. "What I want to do (..) is to show why the social cannot be construed as a kind of material or domain and to dispute the project of providing a 'social explanation' of some other state of affairs" (Latour, 2005: 1). Thus, he wants to replace social explanations of theories and technologies by a perspective that shows how associations of social and physical objects emerge together. Only after these associations have been established and accepted, can a social explanation be convincing. In similar vein, urban form cannot be solely explained from social factors: associations of physical objects and social actors and institutions emerge together. And only once these associations are accepted, can social factors – like actors and structures – be seen as meaningful explanation of urban form.

Under guidance of Bruno Latour, Michel Callon en John Law, over the last twenty years, in the field of the sociology of science and technology, these starting points have been developed into the Actor-Network-Theory (ANT). In line with the practice theory, ANT criticises the construction of groups or actors by the analyst. Actors don't exist apart from associations; they are the result and emerge during their formation. Therefore, groups, actors, or society have to be analysed and explained as a result, just like objects, theories or urban form. According to ANT, there 'is' no society, only more or less temporary associations of human and non-human actors. Although this perspective on the emergence of groups and institutions in practices is in line with practice theory that was outlined above, there is one big difference: ANT perceives objects as actors as well. Now ANT doesn't deny the difference between human and non-human actors, but at the same time it does stress that an explanation of the mutual emergence of both in practices has to be studied symmetrically. For that reason, actors get a new definition as '*any element which bends space around itself, makes other elements dependent upon itself and translates their will into a language of its own*' (Callon & Latour, 1981: 286). Human and non-human actors thus form associations and thus constituting society instead of the other way around (Law, 1992, Latour, 2005). Most strikingly, objects – like the mountains in Hong Kong, or the paddy fields in suburban Guangzhou – not only result from social interaction but also are actively implicated in the formation of associations. Only once this process has been concluded, some actors are perceived as organizing and others as organized. Research has to focus on this process of the production and acceptance of associations, which in ANT is called 'translation'.

Callon and Latour (1981) describe translation as all negotiations, plots, calculations, persuasions, and even violence that result in the authority of an actor to act as a spokesperson on behalf of other (human or non-human) actors. In this process, Callon (1986) discerns four phases. In the first (*problematization*) a focal actor establishes his

point of departure and plan of action concerning an issue. He or she identifies other actors (human and non-human) and by moulding their goals, tries to convince them that his point of view has advantages in terms of their own goals. During the second phase (*interesement*), allies are locked into place. The relations between the identified actors (human and non-human) are strengthened by their choice to contemplate participating in the association, and define themselves and others accordingly. Thus the association becomes less vulnerable to competing focal actors and their associations. When *interesement* is successful, the third phase (*enrolment*) is achieved. Actors in associations are now willing participants of the association. Potential questions on actors and their goals are now transformed into clear statements that are perceived as true. During the last phase of *mobilization* the association becomes institutionalized and the focal actor is acknowledged as formal spokesperson. Associations – actors and their goals – disappear in ‘black boxes’ and are not questioned anymore. The social and the natural are split; and the social are reconstructed as causes of natural objects. After successful translation, “only voices speaking in unison will be heard” (Callon, 1986: 223). However, associations can always be questioned, black boxes can be opened and associations have to be maintained (Callon & Latour, 1981).

Now what does this imply for the city, and for the analysis of urban form? First of all, it implies that cities or city-regions are perceived as an abundance of Actor-Networks of associations. There are not separate physical objects and social actors; both are inescapably linked. Maybe after the acceptance of associations, this link is made invisible, but when researching urban form it has to be brought out into the open. Furthermore, not only do human actors cause urban form to emerge, but also do non-human actors influence associations, and thus urban form. Not only do human actors that are mobilized into associations support objects and through them urban form; also do non-human actors that are mobilized support human actors, their definition and positions. Thus, to anticipate the coming analysis of the urban form of Hong Kong; not only do strategic actors in this city operate to maintain the natural open landscape of mountains, for instance through concentrated urbanization and country parks; these mountains and country parks also ‘allow’ some strategic actors like the big real estate companies and train companies to maintain their dominant role. Thus, in sum, and in addition to practice theory, not only human actors and institutional settings but also physical objects and thus urban form are the result of a mutual process of translation in which human and non-human actors influence mediation. In this way, the objectless social explanation of urban form can be replaced by an objectfull but at the same time non-positivist and relativist analysis. Research into urban form has to focus on the formation of associations between human and non-human actors that both emerge in practices; it is at the same time an analysis of urban form and of the emergence of society and its groups and dominant actors.

#### **2.4 Planning and associations**

Now that we have established that urban form, dominant actors, and institutional settings alike are the result of the mobilization of dominant associations we can turn our attention to planning. After all, according to the start of this paper we are interested in the contribution of urban planning in adjusting urban form. From the above perspective, urban planning has to be studied in relationship to dominant associations of human and non-human actors. For now, we will be content with this conclusion. Successful planning has be part of dominant associations. However,

Actor-Network-Theory adds an interesting extra element to the analysis: generally, planning is perceived as a goal oriented instrumental activity and it is therefore interpreted as cause of changes in space. However, from a perspective of associations, such a framing of planning is the result of the emergence of dominant associations, which will be established after agreement over these associations. However, ANT will focus attention on the emergence of associations, during which time cause and effect are much less clear. Of course, planners can try to act as focal actors, tempting other actors to follow their ‘problematization’. Focal actors and spokespersons can and will also emerge from the world outside of planning. During ‘interessement’ and ‘enrolement’, planning, planners and plans will then be asked to fit into associations, and sometimes will do so. Then they might not have as leading a role, as planning theory makes us believe; or at least they will have to adjust their views to emerging associations. Thus causes and effects can be very ambiguous. Furthermore, during the process of translation, non-human objects also can have a leading role. In that sense, successful planning can also be the effect of the acceptance of non-human objects; and these objects then actually support planning and planners instead of the other way around. So research has to focus on reasons why planners become part of associations, or not. And the influence of planning strategies is relative to these associations. The implications of this perspective for urban planning will become clearer towards the end of the paper.

### **3. Urban Form – Guangzhou and Hong Kong**

In present-day China, both Guangzhou and Hong Kong are multi-million city regions, located in the Pearl River Delta, in Southeast China. Early developments in Guangzhou already started around 900 BC. Its neighbour is a relative infant with a history of just over 150 years. Nonetheless, in that short history Hong Kong established itself as a prime global city with a strong position in services. Despite the unprecedented urban and economic developments, and the resulting growth of Guangzhou, it is still just striving to realize a similar position. On the one hand, this results from the competing economic positions of Shanghai and Beijing within mainland China. On the other hand the economic position of Guangzhou directly related to developments in Hong Kong, especially now that the Pearl River Delta itself is developing as an integrated regional economy (Enright e.a., 2005). Thus, an analysis of Guangzhou necessitates understanding of Hong Kong and the other way around.

#### **3.1 Sprawling Guangzhou – the re-emergence of an economic powerhouse**

Guangzhou is the capitol of Guangdong province. The city is located at the junction of three rivers of which the Zhu Jiang, or Pearl River, is the most important. To the North, the Baiyun Mountains form a natural border; in the South the Zhu Jiang River flows into the Pearl River Delta. Developments in Guangzhou, which started in the central Liwan and Yenxiu districts, have an ancient history, which is closely related to its role in foreign trade (Wu, 1995: 183-189). Already during the T’ang dynasty around 900 AD, the city was one of the famous ports in the world. It developed into an economic and trade centre. In 1757 the harbour of Guangzhou was designated as an exclusive Chinese treaty port. Soon, foreign traders would set up factories on Shamian Island. However, trade turned out to be difficult, and various confrontations on trade, integration, and legal matters between Great Brittain and China, some of which took place during the so-called Opium Wars, successively resulted in

establishment of Hong Kong as a crown colony in 1848 (Welsh, 1993). Soon after, the factories in Guangzhou were closed and traders moved to Hong Kong Island.

With the rise of the economic power of Shanghai, Beijing, and Tianjin in the latter part of the nineteenth century, the economic position of Guangzhou deteriorated. Just like the rest of China, after 1949 Guangzhou entered in a period of rapid industrialisation. However, because of its trading history, the new Communist leaders in Beijing looked unfavourably at the city, and development was curtailed, even more so than the other cities in under-urbanized Maoist China. Like all Chinese cities, before 1949 Guangzhou was a walled city based on millennia-old architectural and urban design traditions (Gaubatz 1999: 1495). All this changed very quickly when development was financed through state capital construction investment (CCI) that supported a project specific development, which was based on sectoral planning (Wu, 1998: 262). State enterprises had a leading role in the transformation of land for industry, and at the same time housing for the workers were included in the development. Furthermore, in line with Maoist thoughts on urban life, most services were provided through these walled workplace communities or 'danwei' (Lu and Perry, 1997). Rural villages collectively owned agricultural land. As a result, Guangzhou remained a relatively compact city, and low housing investments meant high densities and a decreasing average residence space (Xu, 1999: 114). Internally, the city consisted of large amounts of self-catering 'danwei', which formed the centre of social life. And since according to ideology urban residents hardly ever needed to travel beyond work-unit walls, the connections between these were relatively poor, and roads were mainly filled with public busses, trucks, and bicycles (Gaubatz, 1999: 1497). This was reflected by very marginal investments in transportation and housing, as opposed to industry and agriculture (Xu, 1999: 115).

After 1978 all has dramatically changed (figure 2). Because of the growing problems of the Maoist Communist state at the end of the 1970s – fiscal crisis, housing shortage, low economic efficiency – the national economy of China was on the brink of bankruptcy (Wu, 1998: 281). New and radical state policies on fiscal decentralisation, investment diversification, comprehensive development, a land leasing system, and land-use planning were gradually implemented. Guangzhou was one of the first Chinese cities to benefit from the economic reforms and the spatial impacts have been beyond believe. The city transformed into a sprawling suburban field that now spans some 7500 km<sup>2</sup> with an estimated 13 million inhabitants. Also by now the GRP of the city is the highest in China. As a result of the commodification of housing, and with the advent of real estate developers – first state owned and later private – old districts transformed, and new districts were erected in no time: Dongshan, Tianhe, and recently ZhuJiang New Town developed into mixed upmarket residential and new business districts. The architecture and landscaping of this latest addition to urban Guangzhou deliberately creates a world city image that can spark even more development and should guide the city towards a service industries centre. At the same time industry moved to the suburban districts, especially to numerous economic development zones in the South and East that were established to attract foreign investment (Wu, 1998; Gaubatz, 1999: 1504). Suburban districts radically transform with the erection of huge partly self-servicing gated compounds and industries. These are linked to the city by numerous intercity highways. Within the city, the result of suburban developments is an almost inescapable gridlock. Nonetheless, the development of Guangzhou Metro is only at the start, and new railway stations so far

end in the middle of nowhere. New high-speed train links to other main Chinese cities are planned and built at an incredible speed. With the annexation of the huge districts of Panyu to the South and Huadu in the North in 2004, which admittedly remain economically independent, further suburban sprawl seems a matter of time. Under leadership of the new mayor, the growing awareness of the old inner-city areas, where gentrification implied a quick breakdown of traditional places, put redevelopment to a stop for now, leaving behind a dilapidated central city with potential. In all, it is very hard to predict where the urban development of Guangzhou will lead to.

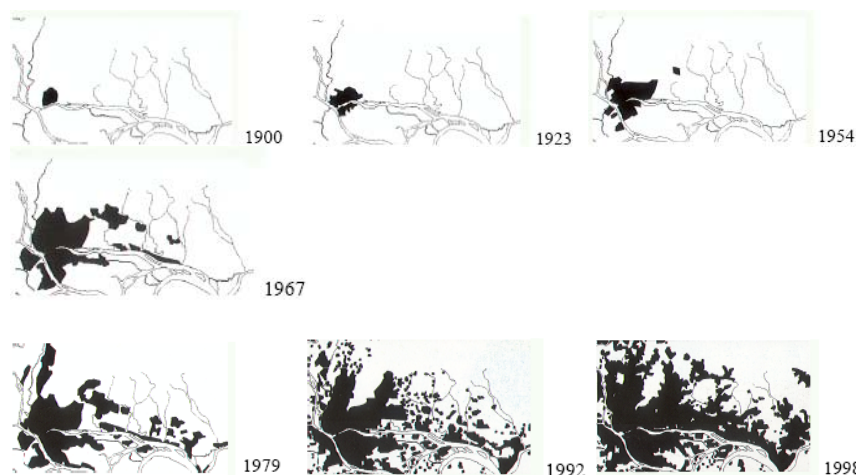


Figure 1: The historical development of urban Guangzhou (Hong, 2004: 42)

### 3.2 Concentrated Hong Kong – the eventful history of a successful economy

The history of Hong Kong directly relates to that of Guangzhou. Until the early years of the 19<sup>th</sup> century, Hong Kong Island and the adjacent parts of Qing Dynasty China were relatively uninhabited.<sup>32</sup> The main concentration of Chinese inhabitants and Western traders was found 200 kilometres upstream of the Pearl River, where in Guangzhou (Canton) foreign trading houses were allowed a somewhat unsteady foothold (Welsh, 1997). Recurrent conflicts over trade and territoriality resulted in the so-called Opium Wars. With the resulting Convention of Nanking (1842) the Qing Dynasty ceded sovereignty over Hong Kong Island to the British by an indefinite lease. After the second Opium War in 1860, again an indefinite lease added Kowloon, a relatively flat area North of Victoria Harbour to the Commonwealth. And in 1898, the Convention of Beijing resulted in a 99-year lease of New Kowloon and the very hilly New Territories. In the years that followed, British institutions like schools, hospitals and the rule of law were established in the colony. Only recently the political situation changed again, when in 1997 China resumed sovereignty over the colony, and added Hong Kong as a Special Administrative Region to its territory. As part of the agreement on this historical event, China promised for the next 50 years not to change the existing political institutions, like the rule of law, and existing regulations. Thus not only socio-culturally, but also politically, Hong Kong emerged as the amalgamation of two cultures: the Chinese and the British.

<sup>32</sup> For a critique of the relatively uninhabited character of early Hong Kong, see Faure (2003: xiii-xxx).



Figure 2: Aerial view of the built up areas of Hong Kong

By 1900 Hong Kong totalled a little over 1000 km<sup>2</sup>, with a headcount of about 300.000 citizens. Because Chinese citizens were allowed to settle in Hong Kong, recurrent political turmoil in the mainland like the Great Leap Forward, caused this total to grow exponentially. The population did fluctuate over the years, but the general trend was a steep incline: 1,5 million in 1940, 4 million in 1970 and more than 7 million now. This trend only ended recently and discussions are now open on the question whether the Hong Kong population will drop to about 6 million or not. Apart from the unfavourable political situation in China, the growing economy of Hong Kong was another decisive factor behind this immigration. Of course both developments are related: large parts of the pre 1949 Chinese economic elite – for instance of Shanghai – moved to Hong Kong, taking their operations with them. As a result, since the 1950s, when Hong Kong became one of the Asian Tigers, it has been one of the fastest growing economies in the world. This was achieved by a very liberal economic regime combined with an aggressive economic development policy. First it functioned as an entrepot for trade with China and a production centre for the world economy (So, 2004). After 1978, when China opened up it transformed into a service economy supporting production places of cheap labour in neighbouring Guangdong province. As a result, Hong Kong is an affluent country. In 2003 its GDP per head was US\$23,930 or eleventh in the world. This is above the United Kingdom, Germany, or France (The Economist, 2003)! Furthermore, it is the ninth largest trading entity in the world, operates the busiest container port in the world in terms of throughput, and is the ninth largest banking-centre in terms of external banking transactions (Hong Kong Government, quoted in So, 2004: 212).

The massive influx of Chinese and other nationals, in combination with the amazing economic development have resulted in a remarkable urban landscape. Most striking are the extreme densities. On average, the amount of inhabitants per square kilometre is over 7000; in the urban areas of Kowloon and Central density is a manifold. This hyper density is facilitated by the private development of podium buildings: endless 40+ storey towers on top of huge 5 storey podiums that harbour public facilities (shopping malls, car parks, swimming pools). These dense areas are primarily located along Victoria harbour, but due to the New Town program, an additional nine centres of dense population have been added. The urban areas are connected by a modern

Metro- and train system that by far outperforms road traffic. Next and on top of the train stations are well-connected shopping malls and private housing estates. Further away are the public housing estates that have been developed to absorb waves of immigrants. The urban areas starkly contrast with the hilly mountains of Hong Kong and the surrounding islands, on which an extensive network of national parks has been established. In the valleys between these mountains, the indigenous villagers have developed land into low-density urban areas. In recent years, infrastructure connections to neighbouring mainland China are upgraded quickly.

### **3.3 Towards an explanation of differences**

The history, political economy, physical landscape, socio-cultural makeup, economic situation, and urban form of Hong Kong and Guangzhou vary considerably. Only after the 1978 reforms, Guangzhou started to develop from a compact work-unit and industry based Maoist city into the emerging economic centre. Mass urbanization leads to an unprecedented suburban growth, especially towards the East and South. The result is a sprawling metropolis that through new road and train infrastructures is well linked to other regions in China, but at the same time has insufficient internal connections that mainly rely on car usage. The city seems to develop into the patchwork of relatively badly connected monocultural and monofunctional enclaves that the narrative of loss warns us for. Hong Kong on the other hand marries a highly successful economy with a landscape of hyper density. Hong Kong Island, Kowloon and the New Towns are located within an amazingly green hilly area. High-rise podium buildings enable extreme densities, and well-developed train lines make sure that the internal connectivity of this city has an amazingly high level. Therefore the question arises if Hong Kong isn't the compact train-based city that urban theory wants us to establish. How can these different urban forms be explained? Does the interpretation of Hong Kong as the planning theorists fairy tale, and Guangzhou as the opposing worst nightmare hold upon closer inspection? What is the role of urban planning in the realization of these differences? And what can be learned?

## **4. Associations in Hong Kong**

The above descriptions of Guangzhou and Hong Kong present the 'ready made' landscapes of both cities; they show the landscapes that resulted from economic changes, political choices, and goal-oriented actions. Now, in line with the relational theoretical position that was outlined above, we have to focus on how these landscapes of human and non-human 'actors', actually mutually emerged through the acceptance of numerous associations. Thus we have to refocus on Hong Kong and Guangzhou 'in the making'. We will first turn our attention to Hong Kong. The analysis is based on extensive research during the first months of 2007, and on the literature on the well-documented history of Hong Kong.

### **4.1 Associations in Hong Kong**

Ever since the inception, Hong Kong has gone through many changes. First, it mainly functioned as an entrepot for English and international traders, after the Second World War, it emerged as an industrial power, and especially after the 1970s it further developed into a service centre. With the constant immigration, especially from mainland China, housing for ever larger numbers had to be build. In Hong Kong, this hasn't led to excessive sprawl; on the contrary, the urban form of this city can be described as hyper dense. This doesn't mean that there haven't been changes. Until the 1950s, Hong Kong mainly consisted of low- to middle-rise buildings along



Victoria Harbour, partly build on reclaimed land. After the 1950, high rise building started to characterise the city. Also, in addition to densely populated Victoria Harbour, various New Town were build in the New Territories, connected to central Hong Kong by new motorways and later train lines. So although compact urbanization has always typified Hong Kong’s urban form, changes have to be accounted for as well. In line with the above theoretical framework, these changes can be analysed as an alternation of dominant associations. In the first period, the concentrated buildings along Victoria Harbor were part of an association that also included a hardly accessible New Territories (before the building of new infrastructures after the 1950), Colonial government (that didn’t want to build in the New Territories because the lease would terminate after 1997, and also because in the cold war building close to communist China), and British trading houses or Hongks that could operate along the banks of Victoria Harbor and that profited of land reclamation. This association changed after the 1950, when the influx of Chinese immigrants led to a dramatic growth in population figures, and the economy took of with unprecedented speed. A new association emerged that included public housing, real estate developers, the land bureau, podium buildings, letters A and B, New Towns, reclamations, train companies and train lines, mountains, and country parks. Notwithstanding this transformation, this association still related to a concentrated urban form. An closer analysis of this association can show why this was the case.

**Table 1: Hong Kong Associations**

	First Association (1848-1950s)	Second Association (1950s – now?)
Objects	Empty New Territories, Victoria harbour, factories, Queens road, Peak	Country parks, hills, tunnels, train lines, roads, new towns, podium buildings
Actors	Colonial government, Hongks, indigenous villagers	HK SAR, train companies, real estate developers, indigenous villagers, ‘urban inhabitants’
Institutions	Leasehold system, ban on living in Mid-levels, reclamation	Leasehold system, rules on train line development, reclamation, new town development

#### 4.2 Objects as non-human ‘actors’

Why did Hong Kong’s urban development result in a hyper-dense and concentrated urban form? When listening to the media, talking to experts or reading publications the general consensus seems to be that this concentrated urban form is a natural necessity. As illustrated by the following quote from *Hong Kong Chic*, a guide to upmarket venues in Hong Kong, land scarcity is depicted as cause of high-density urbanization: “Many of the skyscrapers are award winning examples of contemporary architecture, but expanding upwards has been more a necessity than an act of vanity. Of its 1.104 sq. km (..) Hong Kong has very little flat land – approximately 200 sq. km (..). As a result, commercial and residential rents are some of the highest in the world. The lack of space has led to high population density in concentrated places”. Thus, land scarcity is used as an explanation for high-rise building and extremely high land prices.<sup>33</sup> Strikingly, both popular and scientific literature on Hong Kong time and again refers to this presumption. but never questions its correctness. For instance, a

<sup>33</sup> On average, land costs make up a staggering 60% of development costs in Hong Kong.

few pages later, *Hong Kong Chic* states: “Twice the size of Hong Kong Island, Lantau [which is a part of Hong Kong, B.W.] has still a relatively tiny population”. Why don’t the authors notice the contradiction?

This question becomes all the more pressing after travelling through Hong Kong’s territory for some time. Fact of the matter is that various parts of Hong Kong are hardly inhabited; that the building density in many valleys is remarkably low; that close to the boarder with China Hong Kong is almost empty, where at the other side sprawling Shenzhen encompasses a city of over 10 million inhabitants; that over the last decades low density ‘gated community’ like estates have been developed that seem to be quite popular; that there are many slopes on which building is not impossible, and that historically the first experiments with ‘garden city’ type developments did occur in the vicinity off Waterloo road but where later terminated because the general conception was that it didn’t fit in the Asian context, and not because of lacking space (Bristow, 1989). Admittedly, land in Hong Kong is relatively scarce. But scarcity also is a construct. And together, the above leads to the conclusion that the urban form of Hong Kong could have been much more dispersed. Therefore, Hong Kong land as being scarce is a first actor within the association that guides Hong Kong development.

Also other objects are part of the association that is the landscape of Hong Kong: the podium buildings are a unique building type that emerged in this city, and rules and regulations have been adapted to make their emergence possible (and the other way around). Train lines and tunnels have been introduced into the Hong Kong landscape, which made the New Towns accessible. Country parks were established, which further limited the building space in Hong Kong and thus underlined the scarcity of land in Hong Kong. And also the hills of Hong Kong as unbuilt and unbuildable places (partly because of land slide danger) are part of this association. The fact that buildings reach high up the mountains at mid levels only shows that this impression is at least partly the result of the mediation by men and women. But then, also, the landslides that have been occurring are part of this association. In short, there are many physical objects that actually should be interpreted as non-human actors, which are part of an association.

### **4.3 Actors that associate**

In line with the ANT framework, also human actors are part of the association that is present day Hong Kong. These are: Hong Kong government; the big Hong Kong real estate developers; the train companies MTRC and KCRC; the indigenous inhabitants; and also Hong Kong inhabitants that have a urban culture and urban preferences. Let’s start of with Hong Kong government. First of all, as explained above the lease for the New Territories and New Kowloon extended for 99 years, whereas the lease for Kowloon and Hong Kong Island was indefinite. Therefore, for the period up to the 1950s it made sense for colonial government to concentrate building in these places. Furthermore, since in the Cold War, China was regarded the enemy, keeping essential activities away from the border made sense as well. Thirdly, at the time of start of the lease in 1898, the New Territories were inhabited by a relatively large group of well-organized ‘indigenous inhabitants’ that had cultivated large areas of the available land (Hayes, 2006). To prevent social unrest, colonial government decided to honour these usages, thus limiting the land available for other uses. Now, these last two reasons lasted till the hand over in 1997, but the first not. With the massive immigration and

the resulting rapid expansion of slum dwellings and the economic expansion in the 1950s it became increasingly clear that the New Territories had to be used for residential and economic purposes. However, there is another reason why Hong Kong government benefits from limiting urban sprawl over the New Territories, and this relates to the importance of land premiums for the annual budget.

Before as well as after the handover, government owned all land titles in Hong Kong. Thus, leasehold is the only type of land tenure. Each lease is accompanied by development covenants, regulating type of use and plot ratios. On top of this, zoning plans also contain land uses and plot ratio requirements.<sup>34</sup> As leaseholder, Hong Kong government collects a land premium for every change of use, including urbanization of former rural plots. This premium is based on the difference between before and after value of the lease (Loh, 2006: 5). In monetary terms, maximization of land premiums is beneficial for Hong Kong government, and limiting supply results in scarcity thus achieving maximization. The fact that over 25% of the annual government budget stems from land premiums illustrates the direct importance of land for the functioning of Hong Kong. In the years before the handover of Hong Kong to China, limiting supply was an official government goal, since the United Kingdom had formally agreed to limit land supplies to 50 hectare a year. And although it is hard to prove, many commentators – and most of the 120 people we interviewed in Hong Kong – underwrite the assumption that limiting land supplies has been a government goal before and after as well.

Next to government, the big real estate companies are a second group of actors that benefit from the scarcity of land. At first, this might seem to be contradictory. After all, land premiums have to be paid by developers at the start of the development process. And land premiums do make up an astonishing 60-70% of building costs in Hong Kong. However, these premiums are passed on to the eventual users of property. So as long as users are willing to pay the higher prices – that do apply to everyone in the market – developers are not hurt to much. The other side of the coin is that actually this has big advantages for big developers: the capital needed for development rises steep (Poon, 2006). So entrance to market for small developers is limited (ibid: 84-86). Big developers thus have a strong grip on Hong Kong's real estate market. Additionally, through monopolistic endeavours on other markets that relate to land (electricity, gas, bus services, supermarkets) big real estate conglomerates derived incomparable wealth (ibid: 61-83). Not for nothing, four Hong Kong Chinese entrepreneurs that gained their wealth through real estate and related markets are in Forbes' top 40 of the wealthiest people in the world, with Li Kashing firmly in the top 10. At the same time, in part because of the extremely small houses, the quality of life of middle class and lower class inhabitants is under discussion. And the Asian financial crisis in which housing prices plummeted and these groups saw their savings go up in thin air only added to their woes. In sum, as a result of land scarcity, Hong Kong is characterized by extreme wealth differences and the big real estate developers have profited.

A third group of actors that benefit from land scarcity and thus high densities are the train companies MTRC and KCRC. MTRC was explicitly founded in relationship to the New Town development scheme since the 1950s. The company funds its rail line

---

<sup>34</sup> See Nissim (1998) on the balance between lease requirements and zoning plan requirements.

investments through the acquisition of patches of prime Hong Kong land in the vicinity of its new train stations. However, MTRC doesn't have to pay land premiums and makes enormous profits by auctioning this land to developers. And these profits compensate the railway investments. The implicit consequence of this form of subsidization is that it puts urban development and railway development in one hand, thus resulting in high density and high income communities above and around train stations, thus enabling a profitable operation of the train lines. Stemming from early colonial need to link the colony to Guangzhou, the story of KCRC is much different. However, over the last decade this company is starting to be reorganized in line with MTRC (Seah e.a., 2006).<sup>35</sup>

The 'indigenous inhabitants' of the New Territories make up a last group that benefits from the extremely concentrated urban form of Hong Kong. However, their position is a mixed one. On the one hand, after the start of the 1898 lease, this group strived to protect their existing rights, which resulted in the decision of colonial government to acknowledge existing land uses (Hayes, 2006). In addition, these inhabitants gained other privileges like the 'small house policy' which grants any male descendants of the 'indigenous inhabitants' to build his own three storey house on a small plot of land. Granting these rights definitely privileged them over later immigrants, and this was possible because urban development didn't have to take place on 'their' land. However, at the same time, these inhabitants have not been allowed to further develop their lands for residential or commercial uses. Such a wider competence to develop their own land would have made them much more wealthy, and would have limited the wealth that the big real estate developers. I would also have resulted in a much more dispersed urbanization pattern of Hong Kong.

The last group that is part of this dominant association are the Hong Kong inhabitants that are depicted to have an urban culture, which translates into an urban set of preferences. Time and again, real estate developers and researchers stress that somehow, Hong Kong inhabitants like a luxury way of life and prefer comfort to housing size. The existence of an urban culture thus is used as explanation for the existence of high-density podium buildings. In conclusion, government, big developers, train companies, 'indigenous inhabitants', and Hong Kong urbanites have a stake in concentrated urbanization and the related scarcity of land. Together with various objects – country parks, hills, podium buildings, train lines, tunnels and motorways – they form an association that reflects in Hong Kong space. This association is not uncontested. Various authors stress that this situation led to extreme wealth differences and undermined the quality of life of many Hong Kong inhabitants. However, so far this argument hasn't resulted in the adoption of an alternative association. Therefore, so far mainstream analysis explains the concentrated urban form of Hong Kong from the existence of an urban culture, which explains the high-rise housing preferences of Hong Kong inhabitants, and from the lack of space due to the mountainous landscape and small size of Hong Kong. From an ANT point of view, this explanation itself is the outcome of the acceptance of associations. It therefore, misses the point that objects in the landscape, leading actors, and the urban culture are all the mutual effect of the acceptance of a new association. Especially, it doesn't show, how the maintenance of the concentrated landscape and objects of Hong Kong also support and maintain the dominant coalition.

---

<sup>35</sup> At the moment, discussions on a merger of both companies create extensive political turmoil.

#### **4.4 Planning and associations**

Urban planning in Hong Kong relates in a very specific way to this dominant association of human and non-human actors. Just like other practices – new town development, reclamation, the public housing policy, it functions as a means to translate the specific interpretations of Hong Kong space and urban development that are related to the dominant association into space. Strikingly, Hong Kong plans are very effective, and construction is in line with plans. Urban planners and plans are clearly part of the dominant Hong Kong association. This shows that successful planning is not the result of effective planning or planners themselves, but it stems from a good ‘fit’ with related practices for urban development, with an urban ideology, and with dominant actors that support these. Political capacity in urban planning practices directly relates to its institutional embeddedness. However, in the case of Hong Kong this also seems to limit the possibilities of planning and planners to oppose developments. Thus, planning doesn’t function as a neutral instrument for interest mediation, but is a value laden political instrument in line with the dominant association. But the question is this is a problem has to lay in the hands of the Hong Kong inhabitants, that so far have accepted their role as comfort seeking urbanites that operate within an urban culture. The example of Guangzhou will show that only 200 kilometers up North, developments are very different.

#### **5. Associations in Guangzhou**

A full comparison of Hong Kong and Guangzhou necessitates a similar analysis of the emergence of associations in Guangzhou. However, the research in Guangzhou hasn’t been finished yet. Therefore, the analysis of this section of the developments in Guangzhou can only be based on provisional but ongoing research that was undertaken at the start of 2007. Luckily, probably partly because of its proximity to Hong Kong and its thriving academic world, there is an impressive literature on the developments in this city (e.g. Wu, 1995 and 1998; Wu and Yeh, 1997 and 1999; Gaubatz, 1999; Xu, 1999; Chan e.a., 2003; Wong and Tang, 2005; Xu and Yeh, 2005). This literature provides additional material for the relational interpretation of Guangzhou’s urban development in this section. The emphasis will be on the post-1978 transitions.

##### **5.1 New associations**

The description in section 3.1 shows that the urban form of Guangzhou differs a lot from Hong Kong. Also, it became clear how over the last three decades, concurrently new actors, new rules and institutions, and new objects have emerged in Guangzhou. Pre-1978 Guangzhou was relatively concentrated, had high densities, was internally subdivided in work-units, had inefficient land-use within work-units, and had poor transportation. Wu (1998: 263) shows that this spatial structure emerged with an institutional setting of a planned economy, which strongly depended on Capital Construction Investments by National Government. These Investments were spatially translated by a sectoral-based planning in which land was allocated through the state to industries, which through a project-specific development resulted in factories and ‘danwei’. The leading actors in this setting were national government officials and sectoral planners that allocated funds, together with ‘danwei’ administrators. After 1978 the dominant association in Guangzhou changed dramatically. As was shown, the new landscape consist of large scale gated communities, sprawl, development zones, intercity motorways, and new residential and business centers. Wu (1998: 263)

shows that this landscape relates to a new institutional setting where municipally-based comprehensive planning is combined with foreign capital and self-raised funds and real-estate development. Among the new leading actors are local governments under guidance of the city mayor, rural townships, foreign companies, real estate developers, and national government as infrastructure developer.

Thus, the literature on Guangzhou’s urban development shows a direct link between the changing institutional setting and related dominant actors, and the landscapes that are produced. At the same time, in most explanations, actors and institutional settings are causes of change, and space seems to be a passive willing object that is morphed wherever the actors lead it. Thus, Xu (1999: 265) signals that “the urban built environment, traditionally characterized by the production space, has become a contested terrain that not simply articulates the ideological intent of political power, but also *reflects* the vested interests of the emerging entrepreneurial class” (italics added, B.W.). From an ANT perspective, the interpretation that dominant actors produce Guangzhou’s new spaces is the result of the acceptance of new associations. Just like the new landscape with new objects, the mix of new dominant actors results from ‘translation’. In this process, a new association of objects and actors – or non-human and human ‘actors’ to be more precise – replaced the earlier association of work-units, bad roads, national administrators, sectoral planners, and work-unit administrators. What are the implications of this relational reformulation?

**Table 2: Guangzhou Associations**

	First Association (1949-1978)	Second Association (1978 – now?)
Objects	Danwei, industries, concentrated city, substandard roads	Gated enclaves, development zones, interstate motorways, cars, podium buildings, Zhujiang new town, shopping malls
Actors	Beijing, sectoral planners, danwei managers	Local administrators, real estate developers, municipalities, foreign investors, Beijing, suburban inhabitants
Institutions	Urban and rural land system, capital construction investment, sectoral planning, danwei rules, collective service provision	Leasehold system, land market, private enterprises, infrastructure investments

### **5.2 Human and non-human ‘actors’: the emergence of new gated enclaves**

According to Actor-Network-Theory, new ‘objects’ in Guangzhou’s landscape relate to and support the emergence of new actors. Of course, a good understanding of this process necessitates a detailed analysis of the emergence of all of these individual objects. For now a much more general analysis of a single object has to do. The focus will be on the emergence of large scale gated housing enclaves in suburban Guangzhou. These housing enclaves have been built through market-based property development in the suburban areas of all cities in China roughly since 1990 (Wu, 2005). They are an important exemplar of the transition from public housing – most of which was provided through work-units – to private construction. Real estate developers play a leading role in the construction of housing enclaves (Hong, 2004). Until 1989 all developers were owned by the state. Thereafter, private developers were allowed into the market. In Guangzhou this resulted in 1500 active developers in

1998. In 2003, the amount already was less than 400. In order to be allowed to build an enclave, these developers have to obtain land through the land leasing system, which formally is only possible when the lease is in line with the development plan. Another possibility is to buy land through transaction from another landowner, and thus transfer the right of use; or to obtain land from work-unit compounds that sell off excessive land.

Like in other big cities in China, the amount of new gated enclaves in suburban Guangzhou is astonishing. One such enclave is Star River (Xinhewan), along the San Zhi Xiang River, one of the many branches of the Pearl River in Panyu district. The community is located within the new planned Southern residential suburban subcentre, which Guangzhou municipality plans in line with its 'Opening up South'. The enclave is well connected to the Tianhe District by metro no.3 and via a self built entrance and exit to Huanan Expressway. Entrance beyond the gates of this community is only possible upon invitation. The project occupies an area of more than 1000 acres and will be developed in seven phases of which now four phases with over 4000 units are completed. In a landscaped setting a mix of villa's and 9 to 18 story buildings surrounds water gardens and shrubberies. Cars are parked underground. Star River facilities include a hotel, a clubhouse, a gym, swimming pools, tennis courts, a five hole driving range, Chinese and western restaurants, a shopping street, reading rooms, sauna's, a kindergarten and a primary school. Star River is one example of the newly emerging suburban residential landscape. However many other compounds are not as perfect. Due to illegal building activities some compounds haven't even been finished because in the early period of the liberalization of construction rogue developers took off with consumer money. Due to corruption, other gated enclaves are built on places that don't fit in with government plans.

In line with the 'narrative of loss', explanations of the emergence of these gated communities in suburban Guangzhou would focus on consumer preferences as driving forces. Such an explanation would imply that inhabitants of Guangzhou have suburban housing preferences, or at least trade the bigger size of their house against longer travel times. Also, since they prefer a club setting they prefer the themed character of these enclaves. As was explained above, this demand-side explanation is not very convincing when thinking about space; it is not very probable that these preferences at once changed. Therefore, an explanation also has to pay attention to the supply of these projects. Luckily, probably also because of the marked changes in the institutional setup of the framework in which urban development in China takes place, many of the analyses of Guangzhou's urban development start from such a supply side analysis. For instance, Xu (1999) shows how sprawl in Guangzhou has to be explained from profit maximization of developers, and the need for money through land leases of the cash strapped Guangzhou municipality that also is faced with the impossibility to provide services like schools and roads. Other factors that receive full attention are the new investment structure, new policies on the tertiary sector, the commercialization of housing, and the introduction of the lease system (Wu and Yeh, 1997).

Actor-Network-Theory won't disagree with this 'social' explanation, but it does stress that this explanation only works after the acceptance of the associations of human and non-human actors that support it: motorways and gated compounds have become black boxes. Therefore, suburban compounds, inter city motorways, cars, inhabitants

with suburban preferences, profit maximizing developers and land leasing municipalities are all linked in an association, and only after the acceptance of this association by all, does the 'social' explanation hold. But this only started to work, after the acceptance of the implicated black boxes, groups and interest. For instance, Chinese consumers are tempted to go live in suburban communities, buy cars and travel long times; and they accepted the 'offer'. Then the related suburban living culture is the effect of the acceptance of the new association, and not the cause. Thus the main question is why the new association was accepted. After all, a different type of building and urban form is possible. Is it because Guangzhou inhabitants have suburban preferences; or because they don't mind driving a car? Or is it because the houses in other places are too bad? Or maybe it is because gated enclaves produce such a high level standard of living? Is the main reason that municipal government wants to raise funds through leases? Because civil servants are corrupt? Or is it caused by the immigration into Guangzhou, which puts tremendous stress on the housing market? Or maybe the main explanation is the massive decrease in economic flows through economic globalization, which Actor-Network-Theory's answer is none of these, or maybe all at once. After all, with the acceptance of the new association these explanations become viable. At the same time, because of this acceptance, the emerging landscape also support the leading role of real estate developers in real estate construction because they 'know' consumer preferences. Furthermore, in similar vein these compounds support the emergence of local government in the power structure of China. And in view of the Asian economic crisis, through the positive effects of massive construction projects on the economy, the compounds also support Beijing government (Xu, 1999: 270).

In similar vein, the emergence of other objects like motorways, development zones, high-speed lines have to be studied. For instance, the emergence of development zones again involved local government and civil servants, and real estate developers; but it also involved foreign companies that have to be 'tempted' to the zones, and national government that thus generated more taxes. Motorways also included cars, suburbanites that are willing to wait long hours in traffic, and Beijing government that after the 1997 Asian financial crisis wants to stimulate the national economy through the car as an engine of economic growth. Furthermore, Beijing also to better connect many cities of China, thus increasing the potential for control. And the emergence of rural factories in townships involved foreign companies that were tempted to come, townships that can generate money. Of course all these actors involved in the emergence of the Guangzhou landscape have 'interests' that fit in with these objects, but the crucial ANT observation is that these interests themselves are also the product of the process of transformation, and that the emergence of the aforementioned objects also supports the dominance of these actors.

### **5.3 Planning and associations**

What then is the role of urban planning and urban plan in the formation of these associations in Guangzhou? The answer to this question is: very limited, because planning very often is not a part of dominant associations. In explaining this answer, we need to turn attention to the reorganization of planning after 1978 (Xu, 1999: 97-99). The 1978 economic reforms led to a growing recognition of the need for a better-established land use planning. During the 1980 National Urban Planning Conference, it was made clear that mayors of municipalities should supervise planning, construction, and management of urban development, which with the *City Planning*



*Act* (1989) translated into the preparation of local comprehensive plans (ibid: 97). In line with this Act, planning has to predefine the goals of urban development. Also, according to the rational comprehensive planning model of this Act, plan making has to follow several predefined steps like data collection, designing and selecting alternatives, and implementation. And plan making had to take account to various relevant issues; next to economic or material development these also included concerns about environment, land conservation and other value issues (ibid: 264). Under the new land regulation that accepted the paid transfer of land use rights next to administrative land allocation, development would only be acceptable with ‘two permits and one report’ (land use planning permit, building construction permit, site selection recommendation report) and all developments need prior permission from the planning authority, thus formally creating necessary control mechanisms.

Despite these regulations, urban development in practice deviates not only from the comprehensive intentions of the City Planning Act, but also from the formal plans (Xu, 1999: 264-265). First plans emerge in a setting in which real estate and other entrepreneurs try to maximize their profit. They find a ready ear in cash-strapped municipal governments and townships alike that both generate considerable funds, respectively by leasing enormous amounts of land, and by creating joint venture township enterprises with foreign companies. As a result, the adopted development concept in urban plans is economic growth oriented instead of comprehensive. But even when plans strive to control development, they can be undermined by several factors. First, the existence a land market next to administrative land allocation creates both illegal land transactions and a black land market. Second, because of the persistence of political autarchy, lack of transparency, and the absence of checks and balances, political cadres still have a large room to intervene in land market and planning affairs, and involve in corruption. These limits of the potential of land use planning to control development also translate into a growing tension between the Guangzhou Urban Planning Bureau and the Land & Housing Management Bureau, which easily represent different sides in the conflicts over urban development.

As a result of these constraining factors, planners and plans more often than not are no part of new associations. “Despite the planning system’s very considerable improvement during the reform era, it embodies constraints which systematically privilege those vested with formal power to make land use policies and plans and those with investment resources” (Xu, 1999: 263). And the formal attention for environment, land conservation and other value issues only seems to exist in terms acceptable to the Guangzhou government. From a planning perspective, this leads to an uncontrollable physical expansion of the city, and to widespread illegal and incompatible land. Therefore, contemporary planning fails to perform its function to promote a comprehensive development. This underlines the relational point of view that planners and plans only exert their influence when they become part of associations of human and non-human actors. However, in Guangzhou this is often not the case. The question arises if in concentrated Hong Kong, urban planning has a more positive role in urban development. And what then can be learned of that?

## **6. Planning Chinese Urbanization?**

As was explained at the start, this paper is part of the Respace project that focuses on the contemporary restructuring of the Asian metropolis. It takes issue with the ‘narrative of loss’ that overstresses the role of elite- and TNC consumption in the

production of ephemeral city regions. According to this framing consumers of spaces want to detach themselves from other groups and companies, thus creating their own world, which is supported by prime private infrastructures. Thus groups don't mix anymore, which undermines community feeling and solidarity. The paper criticized the demand-side explanation of urban form that implicitly informs the narrative. Through an analysis of urban form as product, it showed that in the inflexible and non-transparent property market, production is a determining factor in the creation of landscapes as well. And when studying production attention should not only focus on specific producers, but also in the settings in which these operate. Finally, also the objects which exist or emerge in urban landscapes have a formatting function in the production of space. Thus, attention has to focus on actors, institutions and objects and how they emerge mutually. From such a 'symmetrical' point of view, there is not one process of urban splintering, but there are many landscapes and these emerge in relationship to associations of actors and objects. As a result, a gated community – a physical object – is not the same everywhere, because it has to be analyzed in relationship to the associations in which it is embedded; and these associations vary from place to place.

From this theoretical perspective, the paper then analyzed the urban form of two Asian metropolises: Hong Kong and Guangzhou. The Hong Kong analysis showed that creating a concentrated urban structure has always guided spatial development. And although there seems to be continuity in this concentration-centered approach, again several associations turned out to support the emerging urban form and the related dominant actors. First, buildings mainly concentrated along Victoria Harbor. This fitted in with an association that amongst others also included a hardly accessible New Territories (before the building of new infrastructures after the 1950), Colonial government that didn't want to build in the New Territories because the lease would terminate after 1997, and also because in the cold war building close to communist China, British Hongks that could operate along the banks of Victoria Harbor and that profited of land reclamation. This association changed after the 1950, when the influx of Chinese immigrants led to a dramatic growth in population figures, and the economy took off with unprecedented speed. A new association emerged that included public housing, real estate developers, the land bureau, podium buildings, letters A and B, New Towns, reclamations, train companies and train lines, mountains, and country parks. Notwithstanding this transformation, this association still related to a concentrated urban form. Mainstream analysis explains this concentrated urban form from the existence of an urban culture and from the lack of space due to the mountainous landscape and small size of Hong Kong. Again this explanation was criticized because it misses the point how landscape, leading actors, and the urban culture are all the mutual effect of the acceptance of a new association. Especially, it covers up how the maintenance of the concentrated landscape and objects of Hong Kong also support and maintain the dominant coalition. For the same reason, Hong Kong planning was critically evaluated. Urban developments are strikingly in line with formal plans, and urban planners and plans are clearly part of the dominant Hong Kong association. However, in the case of Hong Kong this also seems to limit the possibilities of planning and planners to oppose developments. Thus, planning doesn't function as a neutral arena for interest mediation, but is a value laden political instrument geared to interests of the dominant association.

The analysis of Guangzhou shows an altogether different picture. This analysis was based on unfinished personal research and a secondary look at published material. It showed that over the last two to three decades, the urban form of Guangzhou made a dramatic transformation. Until 1978 it was a concentrated industrialized city mainly made up of work-units centered on factories, and with poor internal connections. After that year it transformed into an enormous sprawling and quickly suburbanizing urban field in which development zones, gated enclaves, motorways and high-speed train lines alternate remaining chunks of the original rural areas. Of course in the Chinese setting, this conversion happened simultaneously with China's economic reforms of 1978, so not surprisingly, the literature on the urban transformation of Guangzhou especially focuses on changes in the institutional structure of China's political economy and the related regulations regarding building and construction. At the same time, the large-scale acceptance of gated communities in Guangzhou is explained from the emergence of a suburban culture that shows that real estate developers build houses according to the preferences of Guangzhou inhabitants. Instead, this paper stressed that gated compounds and other new 'objects' in Guangzhou emerged together with new actors as part of associations that both support each other. And planning turned out only to be partly relevant because it wasn't part of these associations.

Now, there are several conclusions from this comparison of the urban form of Guangzhou and Hong Kong:

First, that there is no general development of urban form towards ephemeral cities. The urban landscapes relate to associations, which are specific to cities, and since many parts of these associations vary over places, the outcomes will remain varied. The specific urban landscapes of Hong Kong and Guangzhou relate to associations that link global and local, and human and non-human elements. There is not one post-modern or post-industrial landscape; only post-industrial landscapes. Based on this conclusion, the narrative of loss has too limited a view on urban restructuring.

Second, and related, urban landscapes shouldn't be studied as absolute, but need to be analysed in relation to the associations of which they are part. From this relational point of view, it becomes clear that actors not only create landscapes, but landscapes also maintain the position of dominant actors. Thus, it becomes clear that objects do play an active part in the emergence of urban form and dominant actors. Studying landscapes in this fashion implies that a physical object, like a gated community, 'is' not an object, but is a relation. Hong Kong and Guangzhou show how there are not only powering actors and a willing world of objects: these also have characteristics, and limits to be molded, and support some actors and others not! Objects are not only there because they are a success or they work: they are made to work because they fit in with dominant associations but they also structure the limits of this 'making work'. Dominant groups, institutional settings and objects mutually emerge. They can only be discerned after acceptance. Then objects, culture and powering actors are used to explain the logical outcomes and the process of making space and actors is 'covered up'.

Third, the differences in the urban form of Guangzhou and Hong Kong cannot be explained with a single reference to housing preferences and the difference between a suburban and urban culture. These preferences and cultures themselves emerge with

associations and have to be explained. Again, the explanatory framework of the narrative of loss seems to be too limited.

Fourth, international comparison shows how actors and their interaction do not suffice as an explanation of urban outcomes. For instance, both in Guangzhou and in Hong Kong real estate developers have a leading role, but they operate differently, and define their interests in different ways. But developers in Hong Kong support a tight land policy, while their Guangzhou colleagues immerse in large-scale land acquisitions (and the other way around!). And why do train companies in Hong Kong have such a leading role? Therefore, analysis has to include why these actors emerge, and how their interests relate to institutional settings, other actors and physical objects.

Fifth, planning has to be studied relatively to these associations as well. Thus, it seems logical to conclude that effective planning has created the urban morphology of Hong Kong, and Guangzhou's less desirable urban makeup results from lacking planning. However, from a relational perspective this paper analyzes how planners and plans are embedded in associations of actors, things, and institutional properties. Successful planners and their plans turn out to be part of dominant associations. If planners and plans are no part of the dominant associations, as is the case in Guangzhou, then its influence for the time being will be limited. If however, planners and plans are part of the dominant association, as is for instance the case in Hong Kong, this still doesn't mean that the evaluation has to be positive, since this participation can severely limit the potential contents of plans, and planning thus functions as an instrument of dominant actors. Hong Kong planning can be effective because it is embedded in matching practices for the production of spaces and accepted interpretations of the physical landscape.

Sixth, changes in institutional regulations can have enormous spatial impacts. In Hong Kong, the emergence of podium buildings. However, again these changes in regulations have to be studied in a relational fashion as parts of associations. Not only are they the starting point of changes; they are caused themselves as well.

## **7. Acknowledgements**

This paper results from research conducted at the Faculty of Architecture of the University of Hong Kong during the first months of 2007. We thank professor Stephen Lau and his students for their participation in and support to the project. The research would have been impossible without the time and information of many experts in Hong Kong and Guangzhou. Their help is kindly acknowledged. Utrecht University, the EFL Stichting (The Netherlands), and the Provincie Utrecht (The Netherlands) financially supported the research.

## **8. References**

- Arefi, M., 1999, Non-place and placelessness as narratives of loss: rethinking the notion of place. *Journal of Urban Design*, 4, 2, 179-195.
- Asbeek Brusse, W., and Wissink, B., 2002, Beyond town and countryside? Spatial planning in a new geography. *Built Environment*, 28, 4, 290-298.
- Banarjee, T., 2001, The future of public space: beyond invented streets and reinvented places. *Journal of the American Planning Association*, 67, 1, 9-24.

- Bourne, L.S., 1982, Urban spatial structure: An introductory essay on concepts and criteria, In: *Internal Structure of the City: Readings on Urban Form, Growth and Policy* (Oxford etc.: Oxford University Press), pp. 28-45.
- Bristow, R., 1984, *Land-use Planning in Hong Kong: History, Policies and Procedures* (Oxford: Oxford University Press)
- Callon, M., 1986, Some elements of a sociology of translation: domestication of the scallops and the fisherman of St Brieux Bay, In Law, J., Ed., *Power, Action and Belief: A New Sociology of Knowledge?* (London: Routledge), pp. 196-223.
- Callon, M., and Latour, B., 1981, Unscrewing the big leviathan: how do actors macro-structure reality, In Knorr Cetina, K., and Cicourel, A., Eds., *Advances in Social Theory and Methodology: Toward an Integration of Micro and Macro Sociologies* (London: Routledge).
- Chan, R.C.K., Yao, Y.M., and Zhao, S.X.B., 2003, Self-help housing strategy for temporary population in Guangzhou, China, In *Habitat International*, 27, 19-35.
- Chapin, Jr.F.S., and Kaiser, E.J., 1979, *Urban Land Use Planning* (Urbana: University of Illinois Press).
- Conzen, M.R.G., and Conzen, M.P., 2004, *Thinking About Urban Form: Papers On Urban Morphology, 1932-1998*. (Bern: Peter Lang).
- Crawford, M., 1999, Blurring the boundaries: public space and private life, In Chase, J., Crawford, M., and Kaliska, J., Eds, *Everyday Urbanism* (New York: The Monacelli Press), pp. 22-35.
- Davis, M., 2006, *Planet of Slums* (London and New York: Verso).
- DiMaggio, P., 1988, Interest and agency in institutional theory, In Zucker, L.G., Ed., *Institutional Patterns and Organizations: Culture and Environment* (Cambridge MA: Ballinger), pp. 3-21.
- Elsheshtawy, Y., 2004, *Planning Middle Eastern Cities: An Urban Kaleidoscope* (London: Routledge).
- Enright, M.J., Scott, E.E., and Chang, K., 2005, *Regional Powerhouse: The Greater Pearl River Delta and the Rise of China* (Singapore: John Wiley & Sons).
- Faludi, A., and Valk, A. van der, 1994, *Rule and Order: Dutch Planning Doctrine in the Twentieth Century* (Dordrecht etc.: Kluwer Academic Publishers).
- Faure, D., Ed., 2003, *Hong Kong: A Reader in Social History* (Oxford: Oxford University Press).
- Gaubatz, P., 1999, China's urban transformation: patterns and processes of morphological change in Beijing, Shanghai and Guangzhou. *Urban Studies*, 36, 9, 1495-1521.
- Giddens, A., 1984, *The Constitution of Society* (Oxford etc.: Polity Press).
- Goodstadt, L.F., 2005, *Uneasy Partners: The Conflict Between Public Interest and Private Profit in Hong Kong* (Hong Kong: Hong Kong University Press).
- Graham, S., and Healey, P., 1999, Relational concepts of space and place: Issues for planning theory and practice. *European Planning Studies*, 7, 5, 623-646.
- Graham, S., and Marvin, S., 2002, *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition* (London etc.: Routledge).
- Gregory, D., and Urry, J., 1985, *Social Relations and Spatial Structures* (London: Macmillan).
- Hajer, M.A., 1995, *The Politics of Environmental Discourse: Ecological Modernization and the Policy Process* (Oxford: Clarendon Press).
- Hajer, M.A., and Reijndorp, A., 2001, *In Search of New Public Domain: Analysis and Strategy* (Rotterdam: Nai Publishers).

- Hayes, J., 2006, *The Great Difference: Hong Kong's New Territories and Its People 1898-2004* (Hong Kong: Hong Kong University Press).
- Hillier, B., and Hanson, J., 1984, *The Social Logic of Space* (Cambridge: Cambridge University Press).
- Hong, C., 2004, The role of private developers in Chinese urban development: a case study of Guangzhou, 1990-2000 (Hong Kong: University of Hong Kong).
- Kostof, S., 1999, *The City Assembled: The Elements of Urban Form through History* (London: Thames and Hutson).
- Kotkin, J., 2000, *The New Geography: How the Digital Revolution is Reshaping the American Landscape* (New York: Random House).
- Lake, R.W., 1983, *Readings in Urban Analysis: Perspectives on Urban Form and Structure*, (New Brunswick, NJ: Center for Urban Policy Research).
- Latour, B., 2005, *Reassembling the Social: An Introduction to Actor-Network-Theory* (Oxford etc.: Oxford University Press).
- Law, J., 1992, Notes on the theory of the actor-network: ordering, strategy, and heterogeneity. *Systems Practice*, 5, 4, 379-393.
- Lefebvre, H., 1996, On urban form, In: *Writings on Cities* (Oxford etc.: Blackwell).
- Loh, C., 2006, Foreword, In: Poon, A., *Land and the Ruling Class in Hong Kong* (Richmond: Alice Poon).
- Low, S., 1996, Spatializing culture: the social production and social construction of public space in Costa Rica. *American Ethnologist*, 23, 4, 861-879.
- March, J.G., and Olsen, J.P., 1984, The new institutionalism: organizational factors in political life, In *The American Political Science Review*, 78, 734-749.
- Marcuse, P., and Kempen, R. van, 2002, *Of States and Cities: The Partitioning of Urban Space*, (Oxford etc.: Oxford University Press).
- McGee, T.G., 1987, *Urbanisasi or Kotadesasi? The Emergence of New Regions of Economic Interaction in Asia*, Working Paper 87-8 (Honolulu, Hawaii: East-West Center).
- Murdoch, J., 1998, The spaces of actor-network theory. *Geoforum*, 29, 4, 357-374.
- Nissim, R., 1998, *Land Administration and Practice in Hong Kong* (Hong Kong: Hong Kong University Press).
- Pannell, C.W., 2002, China's continuing urban transition. *Environment and Planning A*, 34, 1571-1589.
- Poon, A., 2006, *Land and the Ruling Class in Hong Kong* ((Richmond: Alice Poon).
- Sassen S. (1996) *Losing control? Sovereignty in an age of globalization*, Columbia University Press, New York.
- Schatzki, T.R., 1996, *Social Practices: A Wittgensteinian Approach to Human Activity and the Social* (Cambridge, MA: Cambridge University Press),
- So, A.Y., 2004, Hong Kong's pathway to becoming a global city, In Gugler, J, Ed., *World Cities Beyond the West: Globalization, Development and Inequality* (Cambridge: Cambridge University Press).
- Soja, E.W., 2000, *Postmetropolis: Critical Studies of Cities and Regions* (Oxford etc.: Blackwell).
- Terhorst, P.J.F., and Ven, J.C.L. van de, 1997, *Fragmented Brussels and Consolidated Amsterdam: A Comparative Study of the Spatial Organization of Property Rights*, Netherlands Geographical Studies 223 (Amsterdam: University of Amsterdam).
- Urry, J., 1995, *Consuming Places* (London etc.: Routledge).
- UN Department of Economic and Social Affairs, 2002, *World Urbanization Prospects* (New York: United Nations).

- Welsh, F., 1997, *A History of Hong Kong*, 2<sup>nd</sup> Edition (London etc.: Harper Collins).
- Whitehand, J.W.R., 2001, British urban morphology: the Conzenian tradition. *Urban Morphology*, 5, 2, 103-109.
- Whitehand, J.W.R., and Larkham, P.J., 1992, *Urban Landscapes: International Perspectives* (London: Routledge).
- Wang, Y.P., and Murie, A., 1999, Commercial Housing Development in Urban China, In *Urban Studies*, 36, 9, 1475-1494.
- Wong, S.W., and Tang, B.S., 2005, Challenges to the sustainability of 'development zones': A case study of Guangzhou Development District, China, In *Cities*, 22, 4, 303-316.
- Wu, F., 1995, *Changes in the Urban Spatial Structure of a Chinese City in the Midst of Economic Reforms – A Case Study of Guangzhou*, dissertation (Hong Kong: University of Hong Kong).
- Wu, F., 1998, The new structure of building provision and the transformation of the urban landscape in metropolitan Guangzhou, China, In *Urban Studies*, 35, 2, 259-283.
- Wu, F., 2005, Rediscovering the 'gate' under market transition, In *Housing Studies*, 20, 2, 235-254.
- Wu, F., and Yeh, A.G.O., 1997, Changing spatial distribution and determinants of land development in Chinese cities in the transition from a centrally planned economy to a socialist market economy: a case study of Guangzhou, In *Urban Studies*, 34, 11, 1851-1879.
- Wu, F., and Yeh, A.G.O., 1999, Urban spatial structure in a transitional economy: the case of Guangzhou, China, In *APA Journal*, 65, 4, 377-394.
- Xu, J., 1999, *Development Concepts and Land Use Planning Mechanisms in China: a Case Study of Guangzhou*, dissertation (Hong Kong: University of Hong Kong).
- Xu, J. and Yeh, A.G.O., 2005, City repositioning and competitiveness building in regional development: new development strategies in Guangzhou, China, In *International Journal of Urban and Regional Research*, 29, June, 283-308.
- Yeung, Y.M., and Wong, T.K.Y., 2003, *Fifty Years of Public Housing in Hong Kong: A Golden Jubilee Review and Appraisal* (Hong Kong: The Chinese University Press).
- Yurcenar, E.U., 2006, *Everyday Urban Public Space; Turkish Immigrant Women's Perspective* (Amsterdam: Het Spinhuis).

## **Decoding Urban Land Governance: State Reconstruction in Contemporary Chinese Cities**

**Jiang XU, Anthony G.O. YEH**

*The University of Hong Kong, Pokfulam Road, Hong Kong*

### **Abstract**

In the rapidly growing literatures on urban development in China, many authors have emphasized the salient decentralisation of economic governance and the increasingly significant role of local state. However, such arguments neglect a counter-trend in which the central state has de-territorialised and re-hierarchisatized some key functions. Using the case of land governance, this paper argues that facing the complication of changing urban conditions, there is a resurgence of state's regulatory power. The decentralisation of economic governance is now counterbalanced by the rise of state strategies to control the articulation of scales through which a more centrally consolidated power can be achieved. The central state still serves as an important level of economic regulation. In this sense, new interpretations of 'commoditised urban transformation', especially 'commoditised production of the built environment', should be understood by underscoring the interplay between trends of decentralisation and territorialisation and counter-trends of recentralisation and hierarchisation.



## Aspects of Housing Market Analysis

# **Financing Home Purchase for First Time Buyers in Guangzhou and Zhuhai: A Tale of Two Chinese Cities**

**Chi Keung LI**

*Faculty of Architecture, University of Sydney*

## **Abstract**

Using data from 536 interviews of first home buyers in Guangzhou and Zhuhai in 2006, this paper compares the means of financing home purchase in the two cited cities. Relaxation of the finance sector and proliferation of new financial institutions have become the driving force for housing reform in urban China, which encourages home purchase by individuals. China's accession to the World Trade Organization has opened the country's lucrative financial sector to foreign banks such as the Citicorp, the Macquarie Bank, Hong Kong & Shanghai Banking Corporation and so on. The mortgage finance markets used to be dominated by the Bank of Construction and the Bank of China, now other banks have slices of the big cake. The same is true of the colossal Chinese insurance market. But there are contradictions in the dual system of governance, namely a socialist government along side a quasi-capitalist urban economy. Although housing reform has been used as leverage for reforms in other sectors, for example the increase in rent is only feasible by corresponding wage increases; the aim of housing reform in the post-Deng period was clear, and that was promotion of home homeownership.

The financial and property markets in China are becoming internationalized. As more avenues of housing finance are available, more and more people are expected to rely on mortgage loan from the newly minted financial institutions in major Chinese cities. The initial findings suggest a substantial number of respondents bought their homes outright without resort to mortgage facilities of any kind. Case study approach was used in this paper to find out their means of fulfilling the homeownership dream. Sale of public housing at greatly reduced prices in the 1990s told part of the story. Housing reform flats were also sold at incredibly low prices for sitting tenants. As revealed in the interview findings, assistance from relatives and friends were sought in order to climb up the housing ladder in urban China. It is interesting to note that the interview data suggest more home buyers in Guangzhou (58.5%) bought their first home by one-off payment than home buyers in Zhuhai (42.8%), reflected by higher income earnings in Guangzhou and the new housing allowance scheme starting from 1998.

**Keywords:** Home purchase finance, first-time home buyers, housing reform, China

## **Using Mortgage Loans to Finance Home Purchase in Urban China: A Wrestle between Family and Market**

**Si-ming LI<sup>1</sup>, Zheng YI<sup>2</sup>, Quan HOU<sup>1</sup>**

*1. Department of Geography, Hong Kong Baptist University, Kowloon*

*2. Chongqing Planning and Design Institute, Chongqing, China*

### **Abstract**

This paper examines the use of commercial bank mortgage loans to finance home purchase in transitional urban China. Making use of data derived from a household survey conducted in Guangzhou in 2005, this paper tries to unveil who use mortgage loans and who do not. Also analyzed is what drive urban residents to employ mortgage loans and the amount of loan borrowed. The results show that parents' contribution significantly reduces the likelihood of seeking mortgage finance and, if mortgage loan is employed, reduces the amount of loan borrowed. Household income has similar effects. In contrast, housing price acts in the reverse direction. Using mortgage loans to finance home purchase in urban China mimics a wrestle between the family and the market. On the one hand, housing income and parents' support push home buyers away from or less dependent on mortgage loans. On the other hand, the rising housing price is pushing them into mortgage loan market.

**Keywords:** Housing finance, mortgage loan, China, Guangzhou

# The Price of Housing Services in China<sup>36</sup>

Chao Yue TIAN

Department of Economics, George Washington University  
Washington, DC, USA, 20052

Tel: +1 202-994-5838

FAX: +1 202-994-6147

Email: tianc@gwu.edu

## Abstract

The price of housing services in Chinese cities has increased rapidly in recent years. This paper examines the determinants of the change in house price of three Chinese cities: Beijing, Tianjin, and Shanghai from 1998 to 2005. The object is to provide on the economic factors that could cause these changes. The result indicates that the supply side of the market interacts with house prices as the theory in a market economy predicts. However, the demand side factors do not interact with prices of housing services in a fashion that is similar to a market economy. This indicates that the land use policies and restrictions that Chinese government employs have deterred the market to achieve its efficiency. It follows that provision of more land for residential housing and more competitive environment for private developers when auctioning lease rights to the land would help the market to achieve its efficiency.

## 1. Introduction

The residential housing market in China has experienced rapid increase in the last decade (see figure 1 to figure 3). This has attracted attention. Besides the concern that more people with modest income will not be able to afford to own housing, some are worried that this change is a result of arbitrage and it will widen the already worrisome wealth inequality and someday it would cause the social instability. Some are worried that this increase will cause bubbles in the housing market and when it burst, the financial stability of the economy is endangered.

---

<sup>36</sup> I wish to thank Professor Anthony Yezer for comments and instructions on this paper. The author is solely responsible for the errors.

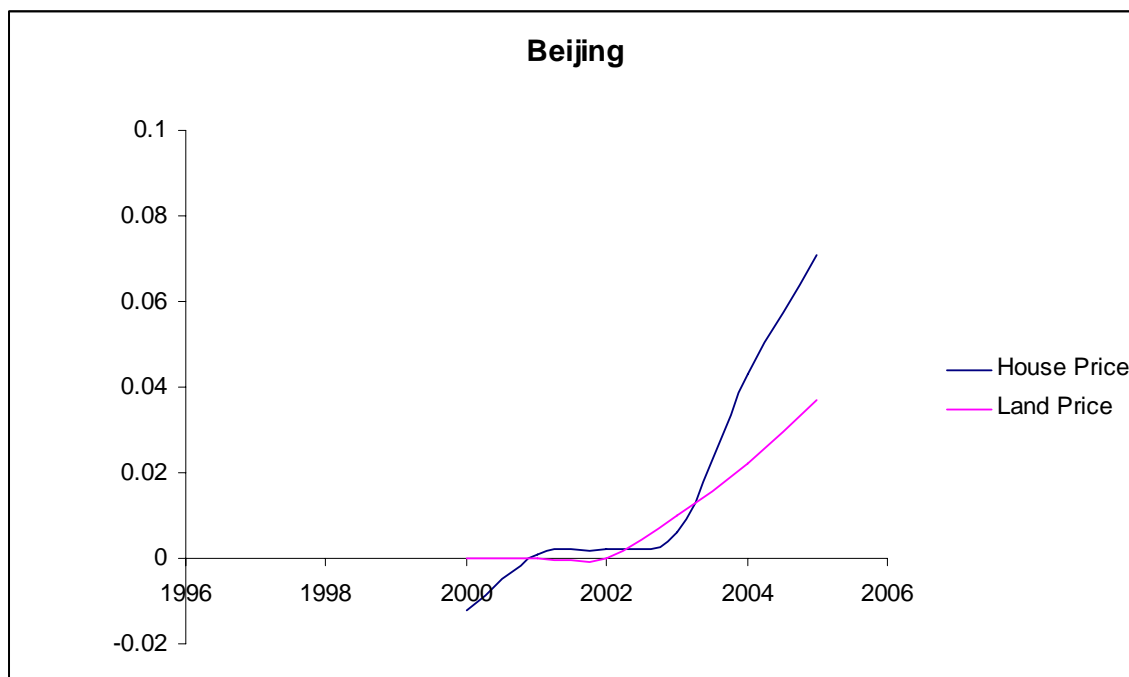
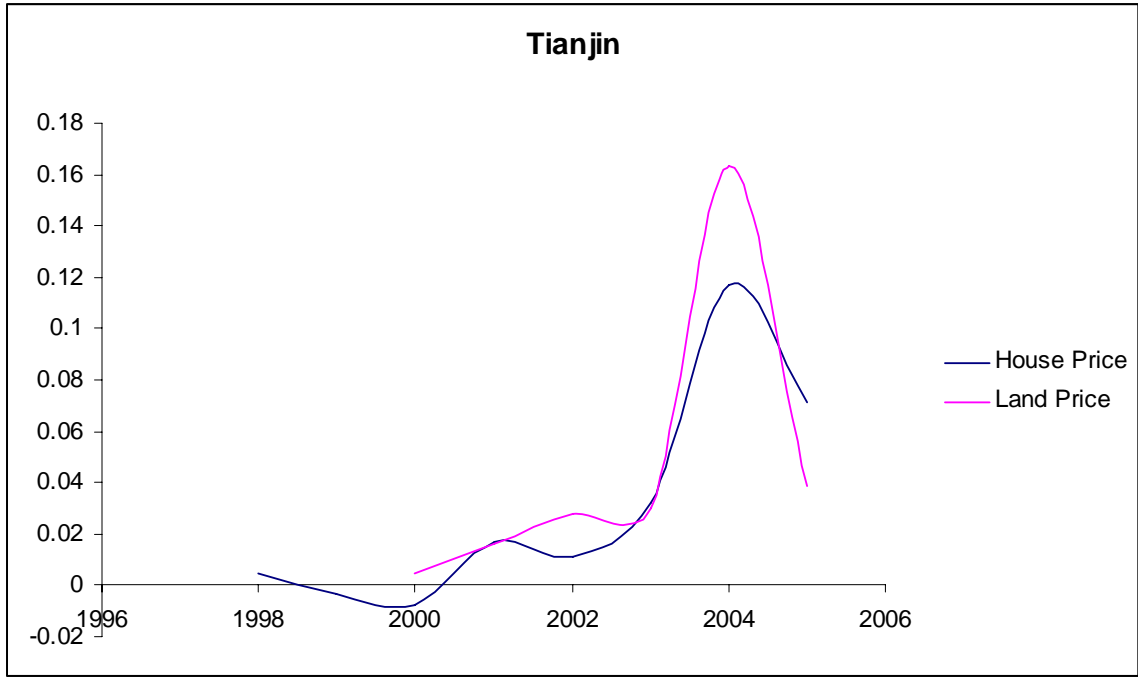
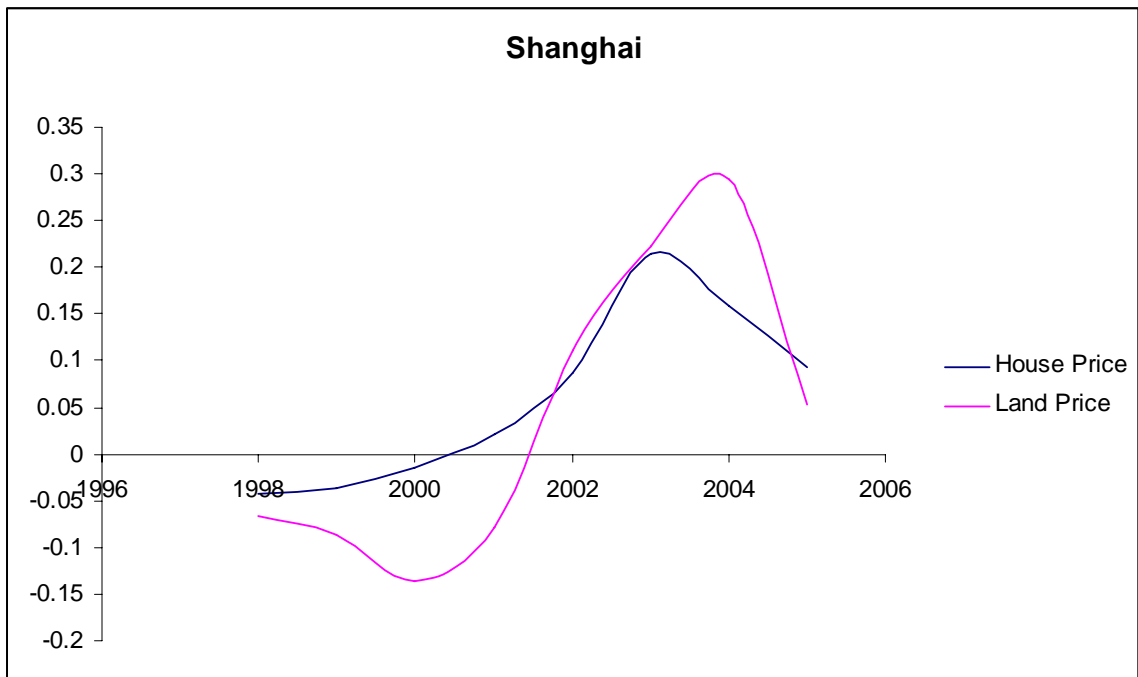


Figure 1 Percentage change in house price and land price in Beijing

Wu (2002) compares house prices in 22 Chinese cities in 1998. He concludes that effects of changing average income and an investment index are both positive suggesting that the house price difference between Chinese cities reflect change in demand in these cities. Shen and Liu (2004) compare the median house price index of 14 Chinese cities over 8 years. A significant advantage of their research is the data they employ. Their absolute price index can be compared across cities and time directly without being translated into percentage changes. They find that income and population are both positive and significant. Lagged house price is also positive and significant. They point out that, after 1998, house prices can not be explained by economic fundamentals well. Li (2007) uses 2000-2005 quarterly data of Shanghai to study the determinants of house price. The study concludes that the factors influence the actual housing prices are the prices of land and historical information of housing prices. Moreover, disposable incomes do not noticeably affect prices so the author suggests that controls on speculative demand should be strengthened. However, the price index the author uses does not have the same base year. That deficiency undermines the reliability of the results.



**Figure 2 Percentage change in house price and land price in Tianjin**



**Figure 3 Percentage change in house price and land price in Shanghai**

The aim of this paper is to examine the determinants of changes in the price of housing services using a panel of three Chinese cities. In the next section the theoretical model and estimation strategy are discussed. Section three describes the data and section four presents the empirical results. Conclusions are discussed in section five.

## **2. Residential Housing Market in China**

In China, the state owns the every piece of land while residents get the right to use (live on) the land. Reforms of the housing market in China since the 1980s have brought many changes. First, individuals are allowed to own structures placed on top of the land. When owners purchase houses on top of the land, they also acquire the right to live in those houses. According to the regulations, residents may renew the lease to the land with the state when at a pre-set timeline for renewing, and so the maintain the status as living on the land. Although this represents a blend of leasing and owning in theory, it is to some extent a way to confirm the ownership of home owners. Owners of the properties can then transfer their rights to others simply by selling the properties.

Secondly, leasing lands to developers to build residential housing has become more flexible. The leasing right is usually auctioned. Developers need to purchase the right to use the land from the government and then build houses on the land. After the developers sell the properties on top of the land, the leasing right is transferred to the new owners of the properties.

The housing market in China is very new and much of the land has become available recently for leasing to developers for constructing homes. Developers usually need to follow strict deadlines in terms building homes on the land. Thus, for recent years, there are relatively complete land price indices.

This data advantage has been explored by a number of scholars interested in the relation between house price and land price. Fong and Liu (2006) use 1998-2005 national quarterly data and their study concludes that house price is the cause of land price. Gao and Mao (2003) use 1999-2002 national quarterly data to conclude that the cause could not be determined between house price and land price. Song and Gao (2007) use 1998-2006 national quarterly data to review that in the short run, land price is the cause of house price and in the long run, both causes. Yan (2006) uses 1999-2005 national quarterly data and conclude that, in the short run, housing price determines land price while in long run both interact with each other. These studies have overlooked the fact that they are using index numbers.

Kuang (2005) uses 1999-2005 national quarterly data and concludes that in the long run, land price is the cause of house price. In the short run, there could be joint causation.

This paper will also explore the land price indices available for the Chinese housing market and also take into account of the possible deficiencies in the indexes for studying the determinants of house price in Chinese housing market.

### **3. House Price and the Demand and Supply of Housing Services**

Our empirical approach is straightforward. The house price is determined jointly by the demand and the supply of housing services and the housing market is assumed in equilibrium. Consider Malpezzi and Mayo (1997)'s three equation model:

$$\ln Q^D = \alpha_1 - \alpha_D * \ln P + \alpha_Y * \ln Y + \alpha_N * \ln N \quad (1)$$

$$\ln Q^S = \alpha_2 + \alpha_s * \ln P \quad (2)$$

$$\ln Q^D = \ln Q^S \quad (3)$$

The variables are defined as the following:  $\ln Q^D$  is the natural logarithm of quantity of housing services demanded;  $\ln Q^S$  is the natural logarithm of quantity of housing services supplied;  $\ln P$  is the natural logarithm of price of housing services;  $\ln Y$  is the natural logarithm of per capita income;  $\ln N$  is the natural logarithm of population. Based on theory, the expected signs of the parameters are  $\alpha_D > 0$ ,  $\alpha_s > 0$ ,  $\alpha_Y > 0$ , and  $\alpha_N > 0$ .

Equation 1 states that the log of aggregate demand for housing services is a function of the log of price of housing services, the log of per capita personal income, and the log of total population. Equation 2 states that the log of aggregate supply of housing services is determined by the log of price of housing services. Equation 3 is the equilibrium condition when the housing market is clear.

The cost to produce housing services usually does not go directly into the supply function because it is hard to estimate and it is very difficult to produce a reliable index. When we have a panel data set, we could assume it is unique to a city and is constant through time so we can eliminate its effects when we apply fixed effect method.

The unique land price series in our data allow adding a major component of the cost to produce housing services into our analysis. We can use land price as a proxy for the cost to produce housing services. We assume that it takes one year for developers to produce housing services after he makes a purchase for the leasing right of the land so pervious year's land price is used as the proxy for current year's cost to produce housing services. The new supply function becomes:

$$\ln Q^S = \alpha_2 + \alpha_s * \ln P - \alpha_\theta * \ln \theta \quad (2')$$

where  $\theta$  is the cost measure which could include two variables, the land price in the previous year for a city and/or the average wages of workers and staff in real estate industry. Based on theory, the expected sign of  $\alpha_\theta$  is greater than zero.

Combining the new supply function equation 2' with equation 1 and equation 3, we have the following reduced form equation for the price of housing.

$$\ln P = \beta_1 + \beta_Y * \ln Y + \beta_N * \ln N + \beta_\theta * \ln \theta \quad (4)$$

, where  $\beta_1 = \frac{\alpha_1 - \alpha_2}{\alpha_s + \alpha_D}$ ;  $\beta_Y = \frac{\alpha_Y}{\alpha_s + \alpha_D}$ ;  $\beta_N = \frac{\alpha_N}{\alpha_s + \alpha_D}$ ;  $\beta_\theta = \frac{\alpha_\theta}{\alpha_s + \alpha_D}$ .

Note that estimates of a reduced-form housing price equation such as equation 4 can provide information on the functioning of the market mechanism in each city. For



example, based on a priori knowledge of the signs of the  $\alpha$ 's, the estimated  $\beta$ 's will have determinant signs. Given that  $\alpha_Y$  and  $\alpha_N$  are known to be  $> 0$  a priori, and  $\alpha_S + \alpha_D > 0$  because  $\alpha_D > 0$  and  $\alpha_S > 0$  the estimated signs of  $\beta_Y > 0$ , and  $\beta_N > 0$  should both be  $> 0$ .

Zheng and Liu (2006) compare 1991-2003 quarterly data in Beijing and Shanghai separately using time series method to conclude that the housing markets are not efficient. We find in our data a strong correlation between the current percentage change in house price and its own lag in each of the markets, too. However, our sample is too small to estimate an unbiased regression when we include the lag of percentage change in house price as one of our explanatory variables.

#### **4. Data and Estimation Strategy**

We collect annual data for the city of Beijing, Tianjin, and Shanghai from 1998 to 2005. The three cities do not have the same number of observations. Shanghai has 8 observations. Beijing and Tianjin have 6 observations each.

We download Chinese Statistical Year Books from ChinaDataOnline as our main data resource. The Chinese Statistical Yearbook in each of the three cities provides the percentage change in house price. Each of the yearbooks also provides land price index as percentage changes. After adjusting the base year to constant year for these two indices, we can plot out the percentage changes in house price and the changes in land price in graph 1 to graph 3.

Each of the yearbooks also provides the average wages of workers and staff in the construction industry and real estate industry. These series are adjusted by Retail Price Index.

CPI using National Statistical Yearbook's Retail Price Index since it does not contain a housing component, we assume the price changes in all other goods are constant across the three cities.

Population Non-agricultural Population (10000 persons) and Income level Average Wage of Staff and Workers(yuan) are collected from China Data Online under City Statistics. Income is also adjusted by Retail Price Index.

Although the interest rate and CPI are not variables in our model, interest rate and CPI might play important roles as major macro economic indicators. They will both be included to determine if housing demand in the three cities responds to them as well. The International Monetary Fund Bank Rate series is our interest rate measure.

Heterogeneity can be a source of concern for researchers who use panel data in their estimation. In our case, Heterogeneity will become a problem if house prices of the three cities are associated with variables that are specific to each city and are difficult to measure. When estimating a linear regression, the unobserved heterogeneity will be captured in the error terms so our classical preconditions will not hold and estimates will be biased. Secondly, if the error terms contain a component that is not systematically associated with the house prices per se, but is

specific to a city, then our estimates suffer heteroskedasticity problems and the estimates would be inefficient.

A popular approach to correct this is to take advantage of the panel feature a data set and use fixed effect or random effect models to deal with the heterogeneity problems across cities.

Let's assume that the appreciation in the price of housing services of each city consists of a part that common to all urban areas and an error term that is unique to its own. Let's further assume that this error term consists of a location factor and a time factor and a random factor and this could be described as:  $\varepsilon_{it} = \alpha_i + \gamma_t + v_{it}$ .  $\alpha_i$  is the location factor that is specific to city i and it does not vary with time.  $\gamma_t$  is the time factor that is specific to each time period t but common across different cities.  $v_{it}$  is a random term for area i and time t which is independently, identically distributed across time and space.

Fixed effects method and random effects method are two popular methods dealing with the heterogeneity using panel data as discussed in Greene (2003). If we can assume that  $\alpha_i$  is constant across time within an urban area, we could implement fixed effects method to account for it. Since the model also includes a time specific trend  $\gamma_t$ , the fixed effects model we implement should be a two way fixed effects model. To implement fixed effects method, we can use Least Squares Dummy Variable model or Mean Differencing model.

The fixed effects method is especially useful when  $\alpha_i$  is correlated with the explanatory variables. But if  $\alpha_i$ s are not correlated with any of the explanatory variables, then random effect will be efficient. The random effects method applies Feasible Generalized Least Squares (FGLS) to account for the heterogeneity in error terms.

Use our regressions as an example. Equation 4 becomes Equation 5 for our panel data when we assume the error term consists of time and city specific effects.

$$\ln P_{it} = \beta_1 + \beta_Y * \ln Y_{it} + \beta_N * \ln N_{it} + \beta_\theta * \ln \theta + \alpha_i + \gamma_t + v_{it} \quad (5)$$

If we can further assume that the time effect is insignificant or  $\gamma_t = 0$  and  $\alpha_i$  is not random, we can take the difference of equation 5 and get equation 6.

$$\Delta \ln P_{it} = \beta_Y * \Delta \ln Y_{it} + \beta_N * \Delta \ln N_{it} + \beta_\theta * \Delta \ln \theta + \Delta v_{it} \quad (6)$$

However, this panel data set approach could not be applied directly to our data set. The price series of residential housing and land are index numbers calculated from appreciation rates. These numbers are meaningless when compared across cities. What we could do is to translate the numbers into percentage changes which are comparable across cities. After doing that, we could apply fixed or random effect model to the data if we have evidence that heterogeneity becomes a concern. Our

three-city and 7 year data can be used to estimate as a panel data set. So instead of estimating Equation 4, we estimate Equation 7 where  $\%A$  is the percentage change of variable  $A$ .

$$\%P_{it} = \beta_1 + \beta_Y * \%Y_{it} + \beta_N * \%N_{it} + \beta_\theta * \%\theta + \alpha_i + \gamma_t + v_{it} \quad (7)$$

Similarly, Equation 6 becomes Equation 8 in a panel data method setting.

$$\Delta\%P_{it} = \beta_Y * \Delta\%Y_{it} + \beta_N * \Delta\%N_{it} + \beta_\theta * \Delta\%\theta + \Delta v_{it} \quad (8)$$

In urban economics, the heterogeneity among cities includes amenity and other cost factors which, according to theory, have been capitalized into the land value. Usually, land value is hard to separate from house value. In our case, the land price is measured separately as an independent index. We actually have a measure of an important source of heterogeneity. That gives us some confidence to run pooled OLS regression and compare the results with the fixed effect method.

We run a series of 8 regressions. Models 1 and 2 are OLS regressions. Because heterogeneity among cities after taking care of the instrument for the cost to produce housing services may be a problem, Models 3 and 4 are Least Square Dummy Variable regressions. Models 5 and 6 are differenced model of fixed effect regressions. Models 7 and 8 are random effect regressions.

We conduct normality test and heteroskedasticity test and compare these test results. If a model does pass the normality test, the test statistics for estimates are not reliable. If a model passes the heteroskedasticity test, combed with the normal distribution of the error terms, the evidence supports that the estimates are efficient. The heteroskedasticity tests consist of two tests. The Breusch-Pagan/Cook-Weisberg test examines if the residuals from a specific regression are homoskedastic and the Ramsey RESET test examines if the specification has an omitted variable problem.

Table 1 is the list of results for the 4 models for the normality test. Tables 2 lists test results for heteroskedasticity tests. These results support the hypothesis that the pooled OLS results for regression 1 and regression 2 do not have omitted variable problem or heteroskedasticity. However, the predicted errors from OLS estimates do have a problem with normality. Predicted errors from fixed effect models passed normality test. Interestingly, fixed effect models (regression 3 and regression 4) do not have advantage on omitted variable test and heteroskedasticity test over OLS models.

Combined with normality test results, these results show our first two models are unbiased and efficient and we do not need to apply fixed effects or random effects model to correct heterogeneity problem.

**Table 1 Skewness/Kurtosis tests for Normality**

Residuals	Pr(Skewness)	Pr(Kurtosis)	adj chi2(2)	Prob>chi2
resi1	0.016	0.066	7.79	0.0204
resi2	0.003	0.01	11.66	0.0029

resi3	0.446	0.357	1.6	0.4496
resi4	0.849	0.41	0.77	0.6805

**Table 2 Breusch-Pagan/Cook-Weisberg test and Ramsey RESET test for heteroskedasticity**

Residuals	Breusch-Pagan / Cook-Weisberg test	Ramsey RESET test
	Prob > chi2	Prob > F
resi1	0.4302	0.3929
resi2	0.344	0.57
resi3	0.2032	0.1845
resi4	0.439	0.0924

## 5. Results

Table 3 shows the results our estimations. Model 1 and Model 2 are our base models. Model 3 to Model 8 are for reference purposes. Given the small sample size, the insignificance of our results are not totally surprising. However, we do have interesting results about the price of housing services. First of all, as the cost measures, land price and average wages of workers and staff in real estate industry have positive signs as we have expected. As the only significant variable in our first two models, the percentage change in land price in model 1 contribute nearly one third of the percentage change in house price.

Table 3 Estimation Results of all 8 models

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Lag of Land Price	<b>0.325</b> (1.81)*	<b>0.257</b> (1.34)	<b>0.619</b> (2.28)**	<b>0.558</b> (1.95)*	<b>0.619</b> (2.28)**	<b>0.325</b> (1.81)*	<b>0.558</b> (1.95)*	<b>0.257</b> (1.34)
CPI	<b>0.773</b> (.66)	<b>0.662</b> (.47)	<b>1.065</b> (.89)	<b>1.044</b> (.75)	<b>1.065</b> (.89)	<b>0.773</b> (.66)	<b>1.044</b> (.75)	<b>0.662</b> (.47)
Population	<b>-0.848</b> (-.64)	<b>-0.063</b> (-.04)	<b>-4.857</b> (-1.71)	<b>-4.037</b> (-1.27)	<b>-4.857</b> (-1.71)	<b>-0.848</b> (-.64)	<b>-4.037</b> (-1.27)	<b>-0.063</b> (-.04)
Income	<b>-0.745</b> (-1.44)	<b>-1.206</b> (-1.78)	<b>-0.966</b> (-1.78)	<b>-1.348</b> (-1.67)	<b>-0.966</b> (-1.78)	<b>-0.745</b> (-1.44)	<b>-1.348</b> (-1.67)	<b>-1.206</b> (1.78)*
Bank Rate	<b>-0.011</b> (-.23)	<b>-0.014</b> (-.22)	<b>-0.013</b> (-.25)	<b>-0.021</b> (-.33)	<b>-0.013</b> (-.25)	<b>-0.011</b> (-.23)	<b>-0.021</b> (-.33)	<b>-0.014</b> (-.22)
Wages		<b>0.303</b> (1.56)		<b>0.218</b> (1.12)			<b>0.218</b> (1.12)	<b>0.303</b> (1.56)
Beijing			<b>-0.009</b> (-.23)	<b>0.003</b> (-.07)				
Tianjin			<b>-0.107</b>	<b>-0.092</b>				

---

			(2.04)*	-1.64				
Constant	0.17	0.184	0.319	0.323	0.285	0.17	0.295	0.184
	(1.90)*	-(1.60)	(2.56)**	(1.99)*	(2.38)**	(1.90)*	-1.83	-(1.60)
R-squared	0.54	0.6	0.7	0.72	0.67		0.64	

Dependent Variable: House Price

Absolute value of t statistics in parentheses

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

---

Inflation on retail goods other than housing services has a positive impact on house price. Interest rate has a negative impact on percentage change in house price. However, our interest rate measure is not only insignificant but also small in terms of magnitude. Seems the housing market may not respond to the change in interest rates well. These results seem to point to a direction for policy makers on how they should target macro economic indicators when they focus their attention on the housing market and the house price.

Most surprisingly, change in population and income have negative effects on house price. As noted above in the theory section, this suggests that  $\alpha_s + \alpha_D > 0$  estimates of  $\beta_Y$  and  $\beta_N$  obtained from a market economy would both be positive. The negative estimates obtained here suggest that government administration of the land market is working to defeat the effects of normal market forces. Perhaps because the government is restricting land sales when growth slows and accelerating them when growth increases to offset what would be normal fluctuations in house prices with growth of income and population. In recent years, there has been slower growth in population and income in these three cities but house prices are still going up very fast. We suspect this would not persist in a longer series of data if market forces were being allowed to operate.

Finally, the current percentage change in house price is strongly correlated with the current percentage change in land price. The correlation test shows an 89 percent association between the two variables. This indicates that the percentage in house price is strongly influenced by developers. This result further supports that the demand for housing services is inelastic in Chinese housing market.

## 6. Conclusion

This paper examines the determinants of the change in the prices of housing services in three Chinese cities. Our results show that the supply side of the market influences the determination of house prices as the theory predicted. Demand side factors, on the other hand, do not interact with price in a fashion that is similar in a market economy. Income level and population interact with the prices of housing services in the opposite direction of what the theory predicts.

The results provide support that the policies and restrictions of Chinese government on leasing residential use land is not helping the real estate market as it intended, but rather deter the market forces to achieve market efficiency.

The Chinese government and the public are worried about the high growth rate in house price for reasons we discussed in the introduction of this paper. Our policy suggestion is not to further restrict the developers. These restrictions will likely increase the growth rate of house price and hurt the economy in the long run. Instead, the government should provide more land supply to residual housing developers and help the market to achieve its efficiency by auctioning the leasing right under a more competitive environment. When more developers join the auctions, the lease price will likely go up. This will achieve two things. First of all, the profit margin for residential developers will be driven to a minimum and that can be an important step to avoid widening the income gaps. And secondly, these extra funds can be used to finance low income households in their housing needs.

The Chinese government should also pay attention to macro economic indicators such as inflation and interest rate. Our analysis suggests that change in inflation has a sizable impact on the change in house price.

## **7. References**

- Fong, Bangyan, Ming Liu (2006). "An empirical study of house price and land price", *Statistics and Decision*, 2006 (4).
- Gao, Bo and Fengfu Mao (2003). "An empirical test of house price and land price", *Industry Economics Research*, 2003 (3).
- Kuang, Weida (2005). "House price and land price: Theory and an Empirical test", *Finance, Trade and Economics*, 2005 (11).
- Li, Hui (2007), "An Empirical Study on Housing Prices and Economic Fundamentals -- A Case Study of Shanghai", *Academy Journal of Guangxi College of Finance and Economics*, 2007 (1)
- Malpezzi, Stephen; Stephen K. Mayo. 1997. "Getting Housing Incentives Right: A Case Study of the Effects of Regulation, Taxes, and Subsidies on Housing Supply in Malaysia." *Land Economics* 73, No. 3 (August): 372-391.
- Shen, Yue and Hongyu Liu (2004). "Residential house price and Economic Fundamentals: An empirical study of 14 Chinese cities from 1995 to 2002 .
- Song, Bo and Bo Gao (2007). "The causality test of house price and land price, 1998-2006", *Modern economics*, 2007 (1).
- Wu, Jianfeng (2002). "Urban residential house price in China", *Urban Development* 2002 (2).
- Yan, Jinhai (2006). "Land Price and Housing Price in China: A Theoretical & Empirical Study", *Econometrics Research*, 2006 (1).
- Zheng, Siqi and Hongyu Liu (2006). "The study of market efficiency – a case of Beijing and Shanghai", *Commerce Reseach*, 2006 (7).

## Property Tax in Transitional Urban China: an Institutional Analysis

Bo-sin TANG<sup>1</sup>, Siu-wai WONG<sup>2</sup>, Sing-cheong LIU<sup>3</sup>

*1. The Hong Kong Polytechnic University, Hong Kong*

*2. HKU SPACE, University of Hong Kong, Hong Kong*

*3. Evergreen Real Estate Consultants, Guangzhou*

### Abstract

Recent upsurge in property prices has caused enormous concerns to the mainland Chinese government. Property tax has been mooted, not only as a probable way of strengthening local government finance, but also as a possible instrument for taming the overheated property markets. However, owing to its bias towards property sales and non-value means of tax allocation, the existing property tax system in China is fraught with many problems and inefficiencies. Restoring some effective forms of value-based taxation for both the transaction and holding of real property should become a major direction of the Chinese government in reforming its property tax system. Drawing upon insights from the literature of new institutional economics, this study explores how the existing property tax institutions have impeded implementation of a value-based approach in taxing real property. It argues that such an approach requires concerted efforts in building up the supportive institutions in land registry, property appraisal, dispute resolution, tax compliance and enforcement. Another important aspect of the institutional reforms requires a careful analysis of the interests of various stakeholders associated with the current tax system and its corresponding cost-benefit redistribution.

**Keywords:** Property tax; real estate market; institutions; transaction costs; institutional change

## Theories on Urban Land Development



## **Marketization of Urban Land: Devolution from State to Society**

**Reginald Yin-Wang KWOK**

*University of Hawaii at Manoa*

### **Abstract**

This paper investigates the policy devolution process in China by reviewing the marketization of urban land. Urban land market was first introduced in 1987 in Shenzhen Special Economic Zone by a land auction. This paper traces the subsequent process of formulating an urban land market model for adoption nationwide. The paper examines the gradual process, moving from authoritarian state control to society utilization.

The paper explains the initial state's justification for the ideological shift and theoretical re-interpretation on land ownership and value. The state insists that land, a state-owned means of production, a Marxist axiom, during the Socialist period, remains unchanged. The use of land by the non-state sectors is to be compensated, but this principle is contradicted to the Marxist theory of value, to which land by itself has no value. The introduction of transfer fees of land use from the state to the society was worked out in theory and the practice, by adopting the Hong Kong land lease system.

The state then proceeded to structure a land use transaction system within the new ideological and theoretical parameters. For local government, land rent was a rare additional non-tax revenue. Setting up objective principles for land pricing and fees in order to maximize state revenue was attempted. In practice, the state was the monopolistic supplier thus controlled all land transactions and prices. The local government retains total control on land transaction, but discovered the absence of land use regulations, multiple ownership, incomplete land site documentation, and lack of institutional and professional support deterred the market. The construction and re-formulation of these institutional mechanisms were the pre-requisite for social consumption of land.

In land transaction negotiations, local governments use the process for land development control. Bureaucratic preference on urban activities and bias on land use distorted the market with irregular land contracts and fees. The un-certainty and unpredictability discouraged most land buyers, interrupted and damaged urban development. Foreign investors and land developers were the main customers, as they had greater resources and bargaining power. The recognition of the role of the society as the urban land market client led to the realization of the necessity to provide an objective and equal opportunity for potential land buyers. The state learnt the importance of an open land market protected by law and institution as the corrective and regulatory devices for fair social assess to land. While recognizing the importance of offering land for the entire society, the local bureaucrats' privileged position and the government's ability to control land development prevented any change of the negotiated sales system.

The urban land market has been devolved from total state control to society participation, and it has gradually opened to the society, but only partially. Whereas the access is limited to the resource-rich and powerful segments of the society, the majority of the society remains outside the market.

## **Constructing the planning theory for transitional China**

**Tingwei ZHANG**

*Asia and China Research Program, Great Cities Institute, University of Illinois at Chicago*

### **Abstract**

City planning as a profession was introduced to China from the west in the 1920s, so was the modern planning theory. In the last fifty years, China developed a socialist centralized planning system with strong influence of the ex-Soviet Union model. Together with the legacy of the western planning theory, the central- planning system predominate China's city planning practice for decades.

China is now in transition from a planned economy to a mixed one, and from a centralized decision structure to a decentralized one. City planning has received more functions as well as challenges, and the planning practice is in a different institutional setting. Chinese planners are striving to construct a planning theory with Chinese characters in the transitional period to guide their daily planning work. The paper suggests that the traditional Chinese philosophy, the socialist planning practice, and contemporary Western panning theory are three sources to the new planning theory. Planning theory should be understood as a combination of the normative theory, the procedural theory, and the institutional theory. More important, China's planning reform should start from a clearer division of functions of planning and focus on the basic function with a reinforced planning implementation capacity.

# **Guanxi Intensive Market: A Sociological Research on the Social Dynamics of Real Estate Market in Mainland China**

**Linyan LI**

*Department of Political Science, Southeast University, China*

## **Abstract**

This is a sociological study on the functioning mechanisms of the real estate market in the Mainland of China. Focusing on *guanxi* phenomena, the paper attempts to explore and analyze the real order of the real estate market. Based on the fieldwork in Nanjing, the empirical findings show that *guanxi*, as a micro structuring principle, plays a role of translating mechanism of the formal rules in mediating the real estate market and the external institutional environments, while within the market, it also functions as an social device of allocation of economic resources and shapes the formation of real estate market profoundly. Under the specific historical conditions, especially the lack of capital and the specific institutional environments, it is argued that, *guanxi*, working as a micro social dynamics, has helped to bring about the growth and the formation of the real estate market.

## **China's Neoliberalization as Great Transformations**

**Fulong WU**

*School of City and Regional Planning, Cardiff University, Cardiff, UK*

### **Abstract**

The central purpose of this presentation is to dispel some of the mysterious cloud surrounding the "strange Chinese case". I see China's neoliberalization as a great transformation, and see how it is locally generated in response to specific spatial-temporal context of China. Tries are made to link this idea with housing and land marketization, and some examples from land and housing developments are used.

## Urbanization in Arid Environment

# A Study on Urban Land Conversion and Mechanism in Urumqi City

Xin-huan ZHANG, De-gang YANG, Xi CHEN

*Xinjiang institute of Ecology and Geography, Chinese Academy of Science, Urumqi  
830011, China*

## **Abstract:**

The rapid development of economy and growth of population cause a great conversion of urban land. Urban land conversion is a complicated process which includes not only urban land expansion but also the transformation between different sorts of urban land. Urumqi, the capital in Xinjiang Province, is one of the special big cities in arid region. In 2002 year, the population reached 1757.2 thousand, the GDP approached 35.22 billion Yuan which accounted for 22.04% in Xinjiang province, the GDP per capita was 20044.78 Yuan which was 2.39 times the same index of Xinjiang province (8382 Yuan). From 1984 to 2002 year, the urban land expanded distinctly and the building-up area increased to 219.28 km<sup>2</sup>. The urban land conversion consisting of land expansion and land transformation occurred evidently. It is important for urban planning to study on urban land conversion and its mechanism.

The data used in this paper are derived from land use map (1:25000) of Urumqi building-up area in 1984 and 2002 year, the map of urban land basis price (1:150000) in Urumqi, the relational statistic data in 2002. The spatial data are dealt with in ArcGIS Desktop 9.2. The table of land transformation between 11 sorts of land from 1984 to 2002 year is obtained with the OVERLAY function in GIS software. Mainly based on the transformation table of Urumqi city, we analyze the process and mechanism of urban land conversion in.

In the process of urban land expansion, non-building land converts to resident land, industrial land, green land and common establishment land mostly. The scale and rate of urban land expansion has different characteristic in different directions. The urban land spreads mainly in north of Urumqi city.

After analyzing the main land conversion, some conclusions are got as follows: (1) The increased part of common establishment land come from 891.91ha non-building land and 424.95ha resident land. While there are 156ha common establishment land which transfer to resident land and 25ha to municipal establishment land. (2) 3490.98ha non-building land is developed to resident land and 378.95ha industrial land near city center convert to resident land. The increased area of resident land mainly transform from non-building land. Resident land is increasing by two ways in the north and the southeast of city, one way is spreading to promote the city area bigger, the other is filling in to make the building-up density higher. (3) For industrial land, the increased part converts from 1637ha non-building land and 247.70ha resident land. Some industrial land changes to 378.95ha resident land, 52.17ha common establishment land and 48.49ha municipal establishment land. The industrial land distributed near the center of city is generally permuted by other sorts of land and industrial land moves to the suburb by degrees.

To sum up, the urban land conversion in Urumqi city has the following characteristic. The north of city is the main part for building land increasing. In the process of urban land conversion, the urban land expansion is more distinct than the urban land transformation between different kinds of land. The main functional land distribute in their spatial rule after expansion and transformation.

The adjustment of market and induction of government are two key mechanisms for urban land conversion. Firstly, influenced by land rent or price, urban land tends to choose suitable location or change its function to make the land use have maximal economy benefit. Secondly, government purchase, requisition purchase or permute urban land to control the supply and demand of land. What's more, the planning work on urban development guides the land developing in order. Base on the theories, the mechanisms for urban land conversion in Urumqi are discussed in detail. The analysis represents that the land price plays very important role in land conversion and urban planning affects the urban land distribution increasingly.

**Key words:** land conversion, mechanism, Urumqi; progress; distribution

## **Analysis on Regional Structure and Spatial Characteristics of Oasis Urban Agglomerations on the Northern Slope of the Tianshan Mountains**

**Yu-fang ZHANG<sup>1,2</sup>, De-gang YANG<sup>1</sup>, Xiao-lei ZHANG<sup>1</sup>**

*1. Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences, Urumqi 830011, China*

*2. Graduate School, Chinese Academy of Sciences, Beijing 100039, China*

### **Abstract**

Optimization of geographic spatial structure is an important aspect and main content of studying urban sustainable development. Mastering the rules of the form and changes in the city clusters will have significant meaning in promoting the urban agglomerations development. In recent years, although it has reached remarkable performance, most of them just focus on the inside structure of single city or urban agglomerations in developed region. The urban agglomerations on the northern slope of the Tianshan Mountains were chosen as typical arid study area in the NW china. Its regional structure and fractal characteristics of urban agglomerations are affected by the scale and distribution of oasis in this area, so its type should belong to oasis urban agglomerations. The economy level is low, while the economic development is fast and potential in the oasis urban agglomerations in the past 15 years. Understanding of the spatial structure and variety characteristics of oasis urban agglomerations is very necessary and meaningful for promoting the economic development of this area.

The objectives of this paper were to analyze the development route of oasis urban agglomerations from 1990 to 2005 and discuss the optimization method of geographic spatial structure on the northern slope of the Tianshan Mountains. To achieve this aim, the geographic spatial structures including the hierarchical structure, the structure urban functional changes and the temporal-spatial feature of size were analyzed through using the fractal theory and combining the cluster analysis.

The research suggested that the rank-scale distribution and spatial interaction has fractal character. The hierarchical structure in oasis urban agglomerations at the northern slope of the Tianshan Mountains has the characteristic such as loosing, primate city distribution, and the uneven population distribution and polarization trend. But from 1990-2005, the urban primacy index decreased and the structure of size-scale optimized. The trend of the agglomerations population is that the centre changed from single to multi-center. However the functional division in urban agglomerations is not very distinctness. The urban economic structure is similar that the leading sector is industry and sectors with superiority are transportation and business industry. In 1990, there was only single isolated relatively centre, so the impact of centralization was remarkable. In 2005, with the function of central cities developing, its centralization and pervasion was enhanced. The urban functional structure is developing and perfecting. Impacted on natural environment influence and restriction, the spatial distribution is linear, and the mostly cities lie on a geographic element as rivers, railway and national artery; The connectivity degree is relatively strong. The display of spatial organizational structure of cities is belt, integration of partial and whole, concentration of megalopolis and economic zone.

**Key words:** fractal theory; size-scale; functional structure; urban agglomerations; the northern slope of the Tianshan Mountains



**Oasis urbanization and Regional Governance of Oasis Metropolitan Area in  
Arid Land of China----A Case study in Urumqi of Xinjiang**

**Hongru DU**

*Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences, Urumqi,  
Xinjiang 830011, China*

**Abstract**

Oasis urbanization is playing the more and more vital role in regional developing process of the arid area in northwest China. Although oasis is dispersed in the large arid desert, the core cities grewed in oasis region have displayed the very obvious situation of agglomeration in recent years so that the realistic foundation for the metropolis circle cultivation and development have been forming. Limited by water resources, land use, administration threshold and so on, regional plan and governance is important for the rapid developing oasis cities. Take Urumqi metropolitan area as a case, this paper analyzes oasis city's development characteristic and the role of regional governance in its metropolitan area. The governance pattern of Urumqi – Changji is an experiment which can manifests not only the particularity of Chinese policy system in regional autonomy for nationalities, but also the sole possession of binding force in arid area. Three government methods used in this metropolitan steered urban growth and metropolitan development, which are unified party committee, unified finance and unified planning. These methods by government leadership cause the increasing housing price, the closing regional cooperation in metropolitan area and unimpeded circulation of urban factors.

# **Spatio-Temporal Pattern Analysis of the Built-Up Area Expansion in China's Aridzone**

**Jing QIAN, Qiming ZHOU**

*Department of Geography, Hong Kong Baptist University, Kowloon*

## **Abstract**

Landuse change is recognized as one of the most important factors leading to environmental change. Increasing cultivated land, expanding urban built-up areas, accelerated deforestation, and shrinking wetland, all have direct impact on the natural environment. Especially urban landuse change represents one of the most active elements in such environmental change since it takes place rapidly as a consequence of economic development and population growth. Urban growth offers a graphic depiction of the interplay between economics, political systems and the environment.

This study focuses on detecting the temporal and spatial expansion of built-up areas in cities in the North Xinjiang Economic Zone during 1990-2005. Multitemporal satellite images including Landsat TM (1990, 1995), ETM (2000, 2002), and CBERS (2005) are used to analyse the spatial pattern and dynamic change in built-up areas. The methodology is based on the theory and methods of landscape ecology and remote sensing spatio-temporal change detection. The aim of the study is to differentiate the variety of landscape pattern and model the pace, intensity and tendency of landuse change in urban areas.

Cities and towns are selected for the case study in Manas River Watershed, including the Centre Town of Manas County, City of Shihezi and part of regimental farm of Division 8. The study area is located in the mid-west of the North Xinjiang Economic Zone with well-developed transportation infrastructure including local roads, highway and railway lines. With increasingly intensifying social and economic development, the local ecological environment has changed dramatically. This study area is one of the regions with the most developed economy in Xinjiang and represents a miniature of the economic development in north Xinjiang.

To detect landuse/cover changes, a variety of change detection techniques have been applied for urban expansion detection. Using Landsat TM imagery for urban and fringe land cover classification, a number of technical challenges exist for better outcome: (1) Conventional spectral classification methods do not perform well, particularly for delineating built-up areas from bare soil and storey deserts. (2) The accuracy of automatic classification for retrieving urban landuse is not satisfactory. It is, therefore, necessary to develop a more effective and practical method to retrieve built-up area from its background.

In this study we take an approach based on object oriented and rule-based methods. Images for the study area are firstly segmented into image objects and the object hierarchy is then built using the segmentation. The spectral, geometrical and topological characteristics of the image objects are measured and they form the basis for the construction of class rules. Image classification is then carried out using the rules. The accuracy of this method is assessed using high-resolution images, aerial

photograph and field investigation data.

The classified images are then used for the analysis of temporal trajectory and spatial pattern of landuse change in the past 15 years. To study urban landscape pattern change and its driving force during this period of time, the methods of landscape ecology are applied to the temporal landuse change trajectory that is established based on pixel history shown on the classified remote sensing images. The spatial pattern and spatial heterogeneity are analysed by employing and computing landscape metric variables including urban landscape diversity index, contagion index and fractal dimension. The results of this study will improve our understanding about urban expansion in the aridzone, where the development constraints in terms of natural and environmental resources greatly vary from those faced by the cities in the coastal region of China.

**Keywords:** remote sensing, change detection, built-up area expansion, change trajectory analysis

## **Evaluating Urban Expansion and Spatial Characteristics in Urumqi, China, by Using GIS and Remote Sensing**

**Wen DONG<sup>1,2</sup>, Xiaolei ZHANG<sup>1</sup>, Degang YANG<sup>1</sup>**

<sup>1</sup> *Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences, Urumqi 830011, China*

<sup>2</sup> *Graduate School, Chinese Academy of Sciences, Beijing 100039, China*

### **Abstract**

The article summarizes the historical development of Urumqi, especially during the last 50 years. Two thousands years ago Urumqi was an important town along the new northern route of the Silk Road, which contributed greatly in promoting Urumqi's economic and cultural exchanges. Now its urban competitive strength has become at the leading position of the 5 capital cities of western China. While striving to become the new economic power house of western China, Urumqi is undergoing a profound restructuring of its economic and, more importantly, its physical form and appearance. In the paper, the expanded area and structure of urban lands and landscape features in Urumqi are analyzed using RS and GIS means based on the MSS image in 1975 and the TM images in 1990, 1999 and 2002, as well as other related maps. On which the scale, intensity and spatial differentiation of the expansion of the Urumqi urban area during different periods are lucubrated. The results reveal that urban expansion was rapid during the periods of 1949—1965 and 1975—1990, and that it was stable after the 1990s. The urban expansion pattern was significantly different during different time periods: the urban area was expanded outwards based on old districts in a spanned development pattern during the period of 1949—1965; development was stagnant during the period of 1965—1975; urban expansion developed mainly in old districts in a grouped way during the period of 1975—1990. The trend of urban expansion along the traffic lines was obvious, and the direction of urban expansion was dominated by the south-north zonal expansion and supplemented by east-west axial expansion; urban expansion reached the development stage of “multiple centers and multiple districts” after the 1990s, and urban networks were developed more precisely after this time. The sources for urban expansion were mainly cultivated lands, grasslands and unused lands; during urban expansion, the land area devoted to traffic lines, residential areas, dispersive industrial and mineral areas, and garden plots was rapidly enlarged.

Finally, the paper points out that despite the significant growth in population, urban area and the industries, there are a lot of difficulties in the urban development in Urumqi. These difficulties are common in most cities of China, but they would become significant barriers to Urumqi's growth in the future. To face the challenges, Urumqi has expanded its administrative boundary and taken a number of planning and infrastructure development initiatives to enhance the competitive strength in the future. This paper outlines the historical development, current conditions, all previous master plan, the economic and physical structure of the city, and the main challenges that Urumqi faces in the future development. Field reconnaissance surveys, interviews and secondary sources are used in the presentation and discussion.

**Keywords:** Xinjiang, Urumqi, urban development, spatial characteristic, urban planning, physical form

Workshop on the Disaggregate Approach to Studying Urban Issues in  
China I

# 基於活動分析法的人類空間行為研究\*

柴彥威 沈潔

(北京大學城市與區域規劃系，北京，100871)

**摘要：**居民日常活動空間和城市日常活動系統是人類空間行為研究中的重要內容，直接反映行為空間形成機制、分佈特徵及其與實體空間的相互關係，並為城市社會生活及其空間體系研究提供了重要的微觀視角。本文就行為空間研究中若干關鍵問題進行探討，認為基於日常活動空間的活動分析法能夠很好的整合和處理這些問題；在對活動分析法相關概念和幾個重要方法介紹的基礎上，提出了相對完整的基於活動分析法的行為空間研究框架。

**關鍵字：**行為空間 活動空間 活動分析法 人類空間行為

## 1 研究背景

人文地理學家一直把人類行為及其與所處系統的經濟、社會等因素之間的互動關係作為其研究焦點，但是傳統人文地理學往往把人類行為看成是相對穩定且可重複發生的一系列事件，認為人類行為具有客觀性和穩定性，因此，大多數人類空間行為研究都局限在匯總層面上，並特別關注經濟活動、人流、物流的區位特徵，關注特定現象的數量和密度的空間變化。自 1960 年代起，人文地理學家開始認識到，人類的空間行為及其與環境之間的相互作用並非想像得那麼簡單，個人對環境的認知偏好以及經濟因素以外的社會文化制約等與人類行為之間的相互關係有待深入的考察。因此，研究開始從以前重視形式與結構的描述向重視過程的描述和解釋轉變，“事物和現象是怎樣並且為什麼出現在其所存在的地方”成為新的以過程為導向的研究主體<sup>[1]</sup>，行為地理學就此興起。早期的研究大多停留在匯總層面上的人類行為特徵，並且強調個人對於物質環境的選擇和偏好；其後，在結構化理論的影響下，行為研究轉為強調外部環境的作用，關注經濟、社會、文化、社會、政治、法律、道德和其他多種環境因素的影響，著眼於日常化、結構化的人類行為<sup>[2]</sup>；即從過去只注重“空間行為”、“例外行為”逐漸走向“空間中的行為”、“日常行為”的研究，無意識的、非探索性的、反復空間的經驗行為開始成為焦點<sup>[3]</sup>。

在這一趨勢下，城市日常活動系統的研究成為人文地理學、行為地理學在城市地域中，關注個人行為與環境互動及其深層作用機制的重要體現。城市日常活動系統指的是由城市居民在進行各種日常活動（如通勤、家務、休閒、購物等）的過程中形成的一種無形的空間體系，是個人慣常的、連續的行為所形成的空間形態與結構系統<sup>[4]</sup>。在有限的時空間資源下對於該系統進行研究，跳出了傳統行為地理學過於強調環境感知的局限性，考慮不同主體日常活動所構成的城市行為環境對於個人行為的整體制約；此外，從社會文化深層結構中找尋城市生活背後模式化的原因，也為從微觀層面上理解城市社會及其空間體系提供了的獨特視角。其中，人類活動分析法（human activity approach）通過移動出行將日

---

\* 基金專案：國家自然科學基金專案，基金號 40671058

作者簡介：

柴彥威（1964—），男，教授，文學博士，主要從事城市社會與行為地理學研究。E-mail:

chyw@pku.edu.cn

沈潔（1981—），女，碩士，研究方向為城市地理與城市規劃。E-mail: shenjie@pku.edu.cn

常活動在時間和空間維度上連續統一起來，突出出行行為與城市功能結構的相互影響；隨著其理論和方法的日益成熟與深化，成為城市空間結構、城市規劃和城市交通研究等領域的熱點<sup>37</sup>。

相比而言，國內相關研究起步較晚<sup>[5]</sup>。但自 20 世紀 90 年代以來，城市研究的相關學科，包括人文地理學、城市規劃學等逐漸開始關注城市中個體人的需求，居民日常活動行為為空間研究已經引起很多學者的興趣。例如，2005 年 8 月的全球華人地理學家大會期間，對行為研究感興趣的國內部分學者在北京大學召開了小型沙龍，就中國城市研究中的個人行為的資料獲取與研究方法進行了討論，並達成繼續展開學術交流的意向；2007 年 12 月將在香港浸會大學舉行專題討論會，就基於非匯總行為方法的中國城市研究問題展開研討。可見，基於個體行為的城市研究及其規劃應用已經成為中國相關學科研究關注的熱點。

與此同時，基於個體行為的實證研究得到開展。從研究方法和視角來看，已經出現的研究成果主要涵蓋三個方面：(1)對城市居民通勤、購物、休閒等日常活動時空間結構的實證研究，側重於空間行為的特徵和決策機制分析<sup>[6-8]</sup>；(2)基於城市居民的認知和意向視角的認知行為空間及城市意象研究<sup>[9-10]</sup>以及特定活動空間形成與分佈規律<sup>[11]</sup>；(3)從行為空間的微觀視角考察宏觀城市空間結構的變化，如利用出行行為分析城市商業中心結構<sup>[12]</sup>、從市民消費行為特徵研究城市商業空間變化<sup>[13-14]</sup>以及基於通勤行為的城市空間的解讀<sup>[15]</sup>。但總體來看，我國的相關研究尚處於起步階段，要麼局限於單一活動和出行行為，忽視了日常活動的多樣性及相關性；要麼強調移動—活動行為的時空連續性，卻缺乏與宏觀空間背景相互作用機制的探討。要言之，行為空間理論所強調的“個人的決策機制”和“個人與周圍環境作用方式”兩方面的理論探討相對缺乏，資料獲取、統計方法和空間模擬技術等研究方法方面尚待加強，另外，相關研究的實踐應用潛力也遠未得到發揮。

因此，北京大學行為地理學研究小組得到國家自然科學基金的資助，從 2007 年開始在北京、深圳相繼實施居民日常行為與活動日誌的抽樣調查，基於移動—活動行為與城市空間互動機制的新框架<sup>[16]</sup>，力求在理論和方法上實現創新。作為理論基礎研究，本文旨在就人類行為空間與城市活動系統研究中關於時間與空間、選擇與制約、活動與移動之間相互關係進行討論，並在引入活動分析法相關概念和重要方法的基礎上，提出相對完整的基於活動分析法的行為空間研究框架。

## 2 行為空間與活動空間的研究

1960~1970 年代，個體在大範圍城市環境背景下的行為空間（Action Space）的研究開始興起，議題的要點是在客觀環境下人們對特定地方的感知效用，以及他們如何劃定自己所熟悉的或者是進行交互作用的地方和空間的範圍<sup>[1]</sup>。Horton 和 Reynolds 較好地歸納出行為空間的概念模型<sup>[17]</sup>，如圖 1 所示：(1)個人因素在其對外客觀空間結構的感知過程中起到了重要的作用；(2)“仁者見仁，智者見智”式的個人感知的形成，受到個人的社會經濟

<sup>37</sup> 2005 年，由交通研究世界大會（World Conference on Transportation Research Society）組織的“交通研究前沿：社會與空間交互”專題研討會在荷蘭阿姆斯特丹召開，會議以社會與空間的交互作為當前交通研究的新焦點，並就其對於出行行為的影響以及這種關係對城市交通和土地利用發展的啟示展開了熱烈的討論；筆者發表了中國城市居民時空間行為與結構的研究成果。2007 年第 86 屆美國科學院交通研究會學術年會（The Transportation Research Board, TRB）上，筆者所參與發表和討論的“活動與時間利用分析最新重要研究”分會場引起了與會者的極大關注，基於活動分析法的行為研究及其交通規劃應用發展成為重要議題。



屬性、在社會網路中的位置、所處的生命週期階段、以及出發地和目的地之間的關係等多方面的影響；(3)在個人行為空間中，居住位置是最為重要的節點；(4) 時間的偏好和感知形成的時間尺度（如居住時間長度的影響）也是需要考慮的因素。

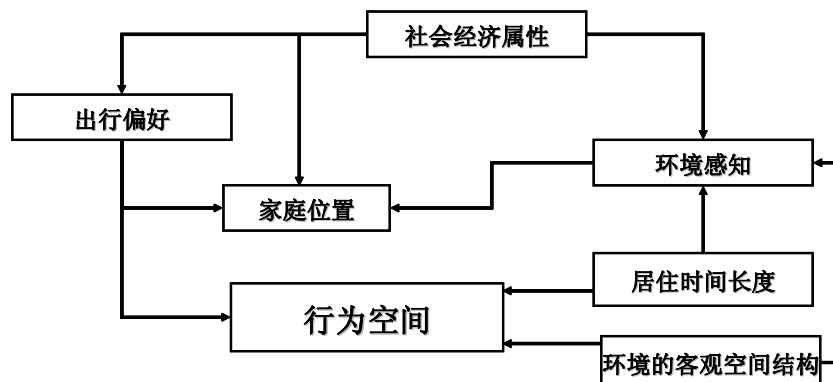


圖 1 行為空間的概念模型圖  
 Fig.1 A concept model of action space  
 資料來源：Horton and Reynolds,1979

活動空間（Activity Space）是個人進行大部分日常活動的空間，可以看成是行為空間的子集。活動空間代表了個人與環境的直接接觸，而這種接觸對於人們形成和劃定自身行為空間範圍起到不可忽視的作用，活動空間也就代表了人們獲取資訊並將這些資訊與其所生活的環境相聯繫的重要過程<sup>[18]</sup>。活動空間是理解個人行為最為主要的方面，其研究問題集中體現了行為空間研究中的關鍵議題。

## 2.1 空間與時間的問題

沒有人能夠否認行為本身所具有的短期動態性和長期穩定性，但是在傳統地理學的研究中，往往忽略時間尺度而局限在人類活動的區位特徵上。實際上，時間不僅同空間一樣是行為固有的特徵，而且時間與空間的結合是一種測量相對空間的有效方法，幫助我們以一種更有效更真實的方法看待世界<sup>[19]</sup>。早期的行為研究只是對典型活動的發生頻率和持續時間的資料匯總，卻不能告訴我們任何關於行為的內容；最為典型的例子是 Chapin 的活動模式相關理論中，僅僅把時間分配作為研究城市活動研究中的重要度量標準<sup>[20]</sup>。Hagerstrand 明確提出“區位不僅意味著空間上的協調還意味著時間上的協調”<sup>[21]</sup>。Cullen 認為，如果要將人們對客觀環境的利用作為一個動態過程來研究，必須要在行為研究中加入時間的方法，否則行為地理學無法實現其預測的目標<sup>[22]</sup>。把時間納入到行為研究中，那麼時間不僅僅具有表面的統計意義，而應是一系列事件發生的路徑，這樣有助於我們區分事件的原因和結果，搞清楚事件之間的關係。可以肯定的是，時間地理學的出現，為空間和時間統一背景下的行為研究提供了重要的理論和方法基礎<sup>[23]</sup>。

## 2.2 選擇和制約的問題

人類行為空間的研究必須要思考兩種完全不同的行為本質及其之間的關係。一是完全基於主觀的、心理因素認知與決策的觀點，另一個則是強調環境因素尤其是社會文化因素決定論的觀點。在活動空間的研究中，大多承認日常活動是選擇和制約的混合產物，但是問題往往圍繞孰輕孰重以及具體的內容過程展開。以 Chapin 的活動理論為基礎的一類研究中，活動模式是作為一種人們滿足其需要的手段，活動產生的過程（動機—選擇—結果）帶有非常明顯的主觀偏好，而環境是作為一種為活動提供機會的因素；制約的影響通過活動的彈性特徵分類體現<sup>[20]</sup>。Cullen 認為，人們日常活動是一種規範化且相對無選擇性的模

式，但是卻是建立在對長期生活選擇的基礎上的，個人的能動選擇仍然是活動解釋的重要方面<sup>[22]</sup>。

與此不同，另一類研究則突出強調環境制約對於日常活動以及行為空間的影響。Hagerstrand 清楚識別出影響日常活動的三類制約，即能力制約、組合制約和權威制約<sup>[21]</sup>。Chapin 的研究強調通過將城市人口分成若干子群體進行匯總分析，認為個人習得行為與日常活動需求動機、選擇等由其社會經濟特徵的決定，具有相似社會經濟特徵的人往往面對相類似的活動機會或者制約條件，例如地理鄰近的居住位置往往使得相同屬性人群的活動空間相互重疊<sup>[20]</sup>。也有不少研究認為社會經濟特徵是個人對長期生活方式和狀態的選擇，並由此影響日常的活動空間<sup>[22, 24]</sup>。另外，從完全不同的角度出發，Shapcott 和 Steadman 對城市日常生活節奏的研究中完全沒有將人作為決策者，而是強調深層的社會制度與文化結構對於日常活動的作用，這種社會文化因素的制約往往通過個人的社會經濟屬性對其行為空間產生影響；他們明確指出，“問題一旦涉及到個人層面，都不能避免將社會結構作為一個規則”。因此，從結構主義的觀點出發，無論是主觀的選擇還是客觀的制約，都是社會制度和文化的產物<sup>[25]</sup>。

### 2.3 活動與移動的關係

早期 Chapin 所提出來的活動概念框架中，強調不同空間位置（尤其是絕對距離因素）為那些能夠滿足人類需求的活動提供了特定條件，但卻忽略了移動在這個過程中的重要性，也沒有將移動作為解釋活動的引數<sup>[20]</sup>。當 Hagerstrand 把人類活動落實到時空圖上的時候，移動在行為空間中的重要性方得以體現<sup>[21]</sup>。出行距離、目的地、方式等都反映並限制人類行為在空間和時間上的結構，這種作用在日常活動空間上表現得尤其重要。移動將分散的活動地點連接起來形成城市活動體系，並幫助我們更好地認識活動空間的本質特徵，認識日常活動安排與城市不同功能空間之間的關係，認識工作活動與購物活動各自的空間特點和形成原因、不同社會經濟屬性人群的活動空間特徵、交通需求量與土地利用之間的關係、多目的出行現象等。Jakle 等通過一個移動等級結構來定義個人的活動空間，凸顯移動在活動空間中的關鍵作用<sup>[18]</sup>。在此基礎上，西方交通研究和規劃領域發展出一套相對完善有效的基於活動研究的理論方法以幫助完成城市出行模擬和交通規劃。

## 3 活動分析法的概念與方法

如上所述，城市居民日常活動空間不僅僅是行為空間的重要組成部分，反映個人與環境最直接最經常的交互過程，而且將行為空間整合在時間和空間的統一背景下，成為特定社會經濟結構下個人層面上長期和短期的選擇和制約多重作用的結果，並且通過各個活動之間的移動將分散的活動地點連接起來形成城市活動體系。因此，作為城市移動—活動系統研究和相關關鍵問題解決的統一框架，人類活動分析法發展成為城市居民日常活動空間研究的重要理論方法。

### 3.1 相關概念

由於人類活動法在交通規劃的出行行為建模和出行模式分析中具有最為直接的應用潛力，因此，城市交通領域基於對出行行為的研究，發展出狹義的活動分析法的概念（Activity-Based Approach），即“在一系列活動的背景中考慮個人或者家庭的出行模式，同時強調時間和空間制約在出行行為中的重要性”<sup>[26]</sup>。出行行為被看作是一種派生需求，

與家庭中的個人爲了滿足特定需求而進行的一系列活動而聯繫在一起；活動和出行在時間、地點和參與者方面是相互關聯的，同時又是發生在時空和有限資源制約下的環境之中。

在行爲地理學中，人類活動分析法被推廣到更爲廣泛的層面，而不僅僅局限在出行行爲的研究上。廣義的人類活動分析法是指通過居民日常活動規律的探討來研究人類空間行爲及其所處城市環境的一種研究視角，也就是說，通過日常活動的研究，將城市居民的行爲放置於一個大尺度的環境中和時間－空間相結合的背景下；同時，通過城市空間行爲的觀點將城市看作是一個個人活動、行爲、反應和交互的集合，用“發生了什麼”而不是土地利用類型的數量特徵來描述和研究城市。因此，活動分析法的目標即是通過研究人們(1)如何利用城市不同區域、(2)如何對他們的選擇環境進行反應、(3)如何安排他們的活動順序並且分配相應的時間、(4)如何將這些與環境變化相聯繫等相關的規律和機制，從而更好地評價那些改變城市環境的若干政策措施。其中，這四個問題正是活動分析法研究的主要內容<sup>[1]</sup>。

可見，在活動分析法的框架下，活動被作爲一種常規發生的習慣行爲，活動模式則通過時間預算、活動發生的地點及其之間的出行所定義，城市居民日常活動空間形成城市活動系統。“如何描述和解釋城市中的生活方式－人們如何完成不同的日常事務、扮演不同的角色並具有自己獨特的態度”是活動模式研究中的核心問題<sup>[20]</sup>。因此，活動系統中移動－活動行爲的時間、空間特徵及其決策和制約的機制都是研究需要解決的問題；行爲地理學和時間地理學中關於行爲空間和活動空間研究則是其重要的理論方法基礎。

### 3.2 幾種主要方法

自人類活動法發展以來，爲了分析和解釋時空背景下人類活動的本質，衍生出不同的分析理論方法，早期研究強調機制解釋，近年來則把活動模式的類比和預測作爲重點。但是，無論研究的側重點如何，城市居民日常活動的時空間資料都是活動分析法研究的重要基礎。

#### 3.2.1 時空間預算

時間預算（time-budgets）和時空間預算（time-space budgets）儘管並非最早出現在行爲研究領域，但卻是活動分析法最爲重要資料獲取和研究方法。時間預算是個人在特定時期內（尤其是較短的時間段，如一天或者一周）所進行的活動的系統記錄，包括活動的順序、時間點、持續時間等等。時空間預算在時間預算的基礎上發展起來，包含了活動位置的相關空間資訊<sup>[27-28]</sup>。這種方法通常採用活動日誌（activity diary）來記錄，包括時間預算、時空間預算、出行記錄等內容，具體的活動根據不同的標準分爲若干類型。

國內基於時間預算方法的研究集中在社會學領域。王雅林等先後於 1980 年、1988 年哈爾濱和齊齊哈爾兩市的九個城鎮中，對城市居民進行了時間分配狀況調查，並從閒暇社會學角度考察了城市居民的生活時間分配<sup>[29, 30]</sup>。1987 年中國人民大學王琪延等人組成了生活時間分配研究課題組，於 1987 年、1996 年以及 2006 年分別對北京市居民 15-75 歲居民一個工作日和一個休息日 24 小時的連續活動狀況進行了調查，並通過對不同時期調查結果的動態比較，探討市民生活方式的變遷<sup>[31, 32]</sup>。這些實證研究在社會學範疇下，將時間作爲測定人們的生活活動以及社會過程、社會現象的一種尺度，強調各類生活時間的社會功能：或基於時間利用結構衡量生活品質的改善，或基於不同時期居民生活時間分配問題反

映社會變遷，或是將時間看成是一種群體的象徵性結構，研究不同階層人群的時間分配差異。但是這些研究對時間分配所反映的社會轉型等深層機制的理論探討有所欠缺；並且較少涉及時間節奏以及空間因素的重要影響，所提出的時間規劃政策指導也相對空泛。

事實上，各類活動完成於特定的空間，而由此產生的位移及時耗對於活動時間安排產生重要的限制影響。因此，在時空間預算基礎上，結合時間地理學的分析手段和行為地理學的相關理論，不僅可以獲得人們的日常活動模式，分析制約條件下活動選擇和行為決策的過程，同時反映整個城市的生活節奏和活動系統特徵與規律，從而為城市規劃提供依據。筆者于 1992 年在蘭州實施了活動日誌調查，內容包括活動時間、活動地點、出行時間以及交通方式、共同參與者等內容，最早將時空間預算與時間地理學運用到中國城市空間結構的研究當中。通過對蘭州市民日常活動出行特徵、生活節奏、時間利用特徵和時空間結構特徵的分析，以及與日本廣島市居民生活空間的比較，反映出中、日城市之間就業地和居住地空間配置格局的差異、購物活動空間結構的兩極化趨勢以及休閒活動空間均以居住地為中心的相似性，顯示出以居民生活行為研究為基礎構建城市內部空間結構的可能<sup>[33]</sup>。

### 3.2.2 時間地理學

時間地理學方法是以時空間預算為基礎，將每個人在時空中的移動，通過用二維平面表示空間，縱軸表示時間的方法表示出來。但是，時間地理學並不停留在新表示方法的提出上，其最終目的是通過制約條件的分析（能力制約、組合制約和權威制約）來闡明路徑形成的時空間機制，並應用到區域和城市規劃中。在早期 Lenntorp 的類比應用中，由於需要較為詳細的資料，使得模型的可操作性較差<sup>[34]</sup>。上個世紀末電腦技術，尤其是地理資訊系統技術的發展，為解決這些問題提供了可能。在 GIS 環境中，時空棱柱能夠模擬個人可達性，實現活動模式分析的視覺化，為理論模型的構建提供有價值的尺度。另外，近年來定位技術<sup>38</sup>（location-aware technologies, LAT）和位置資訊服務（location-based services, LBS）的發展也為應用時間地理學方法獲取更好的精確性和更大的尺度提供了可能性<sup>[35]</sup>。時間地理學方法在活動研究中出現復興的徵兆<sup>[36-39]</sup>，其中，Miller 最先基於 Hagerstrand 和 Pred 的時空棱柱的概念<sup>[21, 40]</sup>，嘗試利用 GIS 技術將相關理論應用到空間分析和規劃中<sup>[36]</sup>，並發展了關於時間地理學的測量理論（Measurement theory of Time Geography）<sup>[41]</sup>。時間地理學的框架和內容將在活動理論研究以及實踐應用中發揮更大的作用。

國內有關時間地理學的全面介紹與應用研究始於 1990 年代中期以後。北京大學的時間地理學研究小組在 1995、1997、1998 年分別對大連、天津、深圳 3 個城市 1400 戶共 2800 人實施了居民日常生活行為的問卷調查，通過統計匯總和典型案例分析考察城市居民日常活動的時空間結構，在此基礎上分別對特定的短期和長期活動——通勤、購物、休閒和遷居的時空間特徵進行分析，嘗試將時間地理學方法應用於中國大城市內部空間結構及居民的活動空間研究之中<sup>[5]</sup>。該研究具有開創性意義，偏重于從居民屬性和認知的角度揭示行為空間特徵，反映社會經濟屬性的制約影響，但是較多停留在描述層面，並缺乏與物質空間環境的相關分析和理論探討；儘管研究嘗試基於行為空間分析就城市空間結構合理化、交通規劃方法提出相應建議，但由於缺乏與新技術結合，這一理論方法在城市公共交通規劃、城市空間優化的作用的發揮也遠遠不夠。

<sup>38</sup> 如全球定位系統等隨身攜帶的無線定位技術。

此後，該研究小組嘗試將時間地理學應用於城市老年人活動空間的研究，在方法上發揮其微觀研究特點，通過日活動路徑的個案分析，研究這一群體日常活動時空間上的特殊性。結果表明，與年輕人相比，老年人活動時空間結構具有對城市設施利用的時間整體節奏性不強、休閒活動持續時間長、購物活動避開高峰時段以及有限的空間範圍等特點，這為老年設施的時間管理、社區規劃等從個體需求角度提供了重要的科學依據<sup>[42]</sup>。另外，劉玉亭等沿用了類似分析方法，對南京市貧困階層的日常活動時空間進行研究，揭示出在物質和社會環境制約下，該特定人群的日常活動單一，並表現出在空間範圍狹小，時間利用分佈零碎的總體特徵，提出城市建設中改善貧困人口相對集中居住地區的生活條件和生存環境這一亟待關注的問題。這兩個研究均為時間地理學應用到城市規劃、城市社會空間研究提供了示例<sup>[43]</sup>。

### 3.2.3 陳述偏好方法

近年陳述偏好方法在活動分析法的行為決策機制研究提供了很好的手段<sup>[44-47]</sup>。傳統的揭示偏好方法（Revealed Preference）中，資料通過詢問實際發生的行為獲得，而陳述偏好方法（Stated Preference）則通過事先設定好可用於描述需要選擇的選項若干屬性，通過設定不同的屬性值形成選項集合，根據被調查者對該集合中各個選項的評價或者選擇來估計和研究其偏好<sup>[48]</sup>。在活動分析法中，根據實驗設計原則設計與移動－活動行為有關的一系列選項，被訪者陳述對這些選項的偏好或者選擇，從而通過偏好形成機制和由偏好函數和決策模型所估計的決策行為來預測現實中的個人行為。SP 方法的資料可以有針對性的設計變數和選項，可以同時考慮多個變數的情況；並且由於實驗過程是事先設定好的，可以很容易的進行統計上相關性、多變數等問題的控制。從問題的解決上來說，RP 方法很難直接評價和估計目前尚不存在條件下的情況，而 SP 方法則能夠基於研究所關注的假設來預測不存在條件下的服務需求。此外，SP 方法可以對不同屬性的相對重要性進行數量的比較和評價，幫助規劃者和政策制定者制定合理的計畫。SP 方法與 RP 方法促使研究可以在解決選擇和制約兩者的相互關係上找到可操作的結合點。

香港浸會大學王冬根等對北京市居民居住空間偏好的 SP 調查，是基於該方法研究中國城市的少見研究之一<sup>[49]</sup>。該研究將影響居住偏好的屬性分為鄰里環境和住房條件兩組，前者包括地區、可達性、生活便利性與治安，後者包括價格、朝向、樓房類型、戶型和物業管理，在設定每一個屬性的不同水準以後，通過正交設計組合成不同的選項集合供居民進行選擇。通過對所收集資料的統計分析，揭示出在居住選擇過程中，地區比住房本身的條件對偏好產生更顯著的影響。可見，這種方法有利於建立多變數的計量模型，對不同要素進行評價，對於複雜的行為決策研究有很大的幫助。

## 4 基於活動分析法人類空間行為研究

綜上，行為空間和活動空間的相關研究發展必須基於空間和時間的框架下，考慮活動和移動的關係，探討行為機制中選擇和制約的本質以及社會經濟結構對這些方面的影響。雖然人類活動分析法為我們提供了一個很好的分析視角，但是即使到現在，這種方法仍然缺乏一個系統全面的體系，尚未在研究理論體系層面形成獨特完善的研究範式。伴隨著人本規劃發展理念的興起，以及資料可獲得性和分析技術的不斷提高，活動分析法在行為空間及城市研究中益發重要，亟待理論方法上的新突破。因此，本文嘗試構建基於活動分析法的行為空間研究框架（圖 2）。

活動分析法研究以行為空間及城市研究相關學科理論為交叉研究的理論背景，以活動日誌調查、SP 方法和 RP 方法、統計資料和 GIS 空間資料等多元資料源為分析基礎，在時空間背景下展開城市居民日常移動－活動行為的研究，包括通勤、購物、休閒等主要日常活動及出行，探討和類比居民移動－活動模式。在此過程中，從選擇和制約的視角揭示模式形成的機制：通過個人偏好解釋活動安排、目的地選擇、停留模式等決策過程，制約方面則強調模式形成過程中空間、時間和參與者本身社會經濟特徵等方面的因素，同時強調分析空間行為過程中選擇與制約相互關係和作用。在移動－活動系統特徵與行為機制研究的基礎上，最終通過行為空間模擬、移動－活動需求預測和適應行為預測等，為城市空間優化、交通規劃與出行需求管理等方面的政策制定提供科學依據。

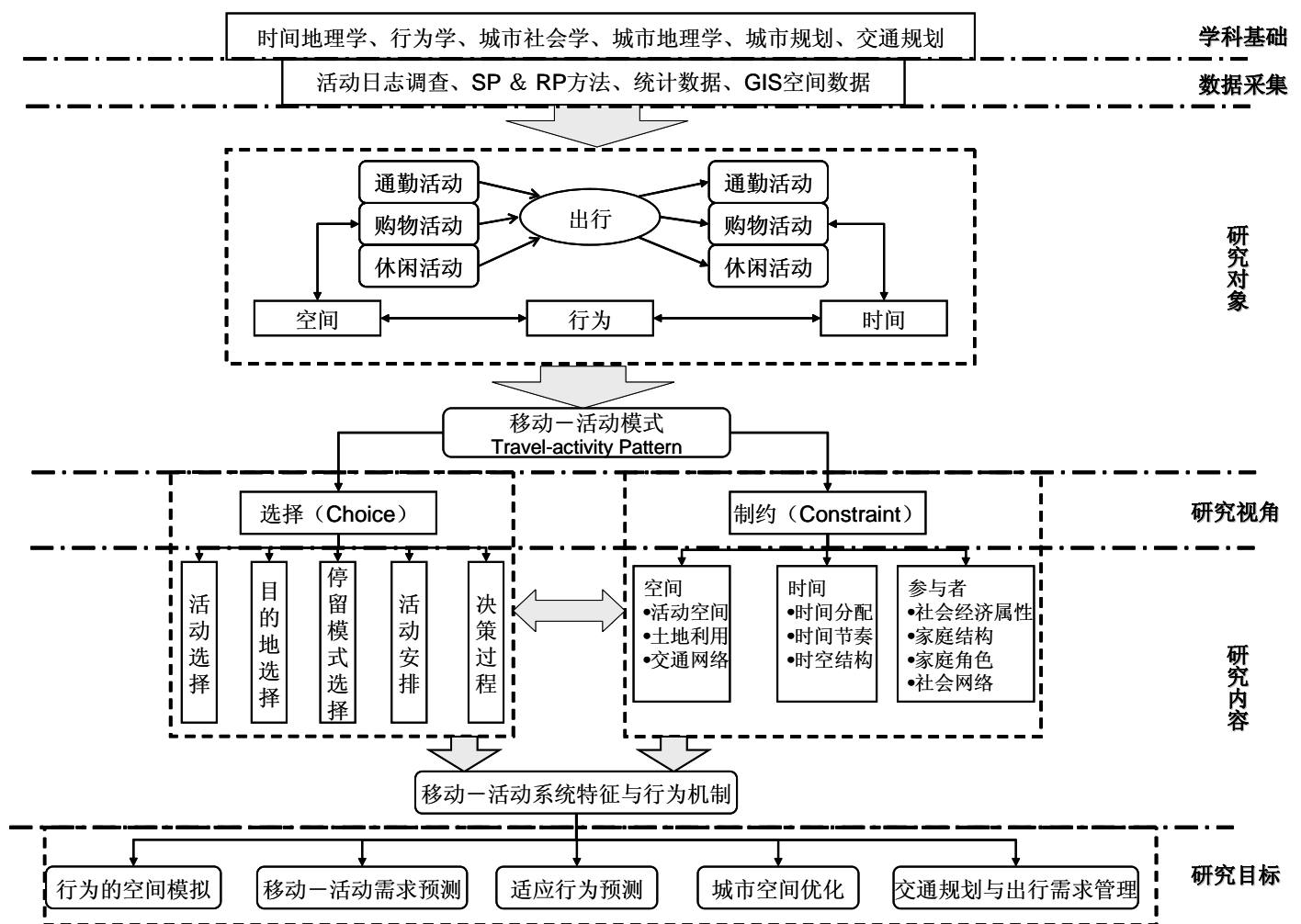


圖 2 基於活動分析法的人類空間行為研究

Fig.2 Framework of Activity-based approach to human spatial behavior

### 5 結論與展望

基於個體行為空間的研究使人文地理學家能夠更為深入、具體地探討人類活動與周圍環境之間的關係，而居民日常活動空間則是其中最為重要的內容，是個人行為空間形成機制、分佈特徵以及與實體空間相互關係最為直接的表現。基於活動分析法的個人行為空間研究強調時間和空間的統一、選擇和制約的關係、活動與移動的聯繫；在方法上通過個人

偏好與社會經濟結構分析探討行為機制，通過時空間預算、時間地理學方法與近年來發展起來的 GIS 等技術類比日常移動－活動模式；從而對居民個人行為空間特徵和機制、城市移動－活動系統進行研究，並為相關規劃和政策制定提供依據。

我國相關領域的研究，儘管在理論、方法以及研究資料可獲得性、空間分析技術等方面仍然相對落後，但是該內容卻受到越來越多研究者的關注。在今後的研究中，不僅要深入瞭解和借鑒西方的相關研究，同時也要立足中國城市的具體情況，尤其是考慮經濟轉型期的特殊背景來探討居民日常行為與空間環境相互作用的機制，最終為從個體層面理解人類行為與城市化以及中國城市的社會經濟轉型等提供科學依據。

## 6. 參考文獻

- [1] Golledge R.G., Stimson R.J. *Spatial Behavior: A Geographic Perspective* [M]. New York: the Guilford Press, 1997.
- [2] Giddens A., *The constitution of society: outline of the theory of the structuration*. Cambridge: Polity Press, 1984.
- [3] 岡本耕平. 都市空間の認知と行動[M]. 東京:古今書院, 2000, 288.
- [4] 柴彥威. 行為地理學研究的方法論問題[J]. 地域研究與開發, 2005, 24 (2) : 1-4
- [5] 張文奎. 行為地理學研究的基本理論問題, 地理科學, 1990, 10(2): 159-167
- [6] 柴彥威等. 中國城市的時空間結構[M]. 北京: 北京大學出版社, 2002.
- [7] 王德, 朱瑋, 黃萬樞. 南京東路消費行為的空間特徵分析[J]. 城市規劃匯刊, 2004, 149: 31-36
- [8] 李九全, 王興中. 中國內陸大市場所的社會空間結構模式研究—以西安為例[J]. 人文地理, 1997, 12 (3) : 29-37
- [9] 林玉蓮. 武漢市城市意象的研究[J]. 新建築, 1999年, 1: 41-43
- [10] 顧朝林, 宋國臣. 北京城市意象空間及構成要素研究[J]. 地理學報, 2001, 56 (1) :
- [11] 余向洋, 王興中. 城市社區環境下商業性娛樂場所的空間結構[J]. 人文地理, 2003, 18 (2) : 30-36
- [12] 王德, 張晉慶. 上海市消費者出行特徵與商業空間結構分析[J]. 規劃研究, 2001, 10: 6-14
- [13] 沈潔, 柴彥威. 郊區化背景下北京市民城市中心商業區的利用特徵. 人文地理, 2006, Vol.21, No.5: 113-123
- [14] 龍韜, 柴彥威. 北京市民郊區大型購物中心的利用特徵—以北京金源時代購物中心為例. 人文地理, 2006, Vol.21, No.5: 117-123
- [15] 周素紅, 閔小培. 基於居民通勤行為分析的城市空間解讀——以廣州市典型街區為案例[J]. 地理學報, 2006, 61 (2) : 179-189
- [16] 柴彥威, 沈潔. 基於居民移動—活動行為的城市空間研究[J]. 人文地理, 2006, Vol.21, No.5: 108-112
- [17] Horton F.E. and Reynolds D.R. An investigation of individual action spaces: A progress report [J]. *Proceeding of the Association of American Geographers*, 1969, 1: 70-75
- [18] Jakle J.A., and Brunn S. and Roseman, C.C. *Human spatial behavior* [M]. North Scituate, MA: Duxbury Press, 1976
- [19] Parkes D., and Thrift N. *Times, spaces and places* [M]. New York: John Wiley, 1980
- [20] Chapin F.S. *Human activity patterns in the city* [M]. NY: John Wiley and Sons, 1974.

- [21] Hägerstrand T. What about people in regional science [J]. Papers and proceedings of the regional science association, 1970 (24) : 7~21
- [22] Cullen I.G., The treatment of time in the explanation of spatial behavior [A]. In: Carlstein T. et al. Timing space and spacing Time. Vol. 2: Human activity and Time Geography [M]. London: Edward Arnold, 1978.
- [23] 柴彥威. 時間地理學的起源、主要概念及應用[J]. 地理科學, 1998, 18(1) : 65~72
- [24] Gärling T., Brännäs K., Garvill J., Golledge R.G., Gopal S., Holm E. and Lindberg E. Household activity scheduling [C]. The Fifth World Conference on Transportation Research, Yokohama, 1989
- [25] Shapcott M. and Steadman P. Rhythms of urban activity [A]. In Carlstein T., Parkes D. and Thrift N. (Eds.). Human activity and time geography (Volume 2), London: Edward Arnold, 1978: 49~74
- [26] Kitamura R. An evaluation of activity-based travel analysis [J]. Transportation, 1988, 15(1): 9~34
- [27] Chapin F.S. Human time allocation in the city [A]. In Carlstein T., Parkes D. and Thrift N. (Eds.). Human activity and time geography (volume 2). London: Edward Arnold, 1978: 13~26
- [28] Anderson J. Space-time budgets and activity studies in urban geography and planning [J]. Environment and planning, 1971, 3: 353~368
- [29] 王雅林, 城鎮居民時間預算研究[J]. 中國社會科學, 1991, (2) : 197-212.
- [30] 王雅林, 董鴻揚. 閒暇社會學[M]. 哈爾濱: 黑龍江人民出版社, 1992
- [31] 王琪延、張衛紅、龔江輝著. 城市居民的生活時間分配[M]. 北京: 經濟科學出版社, 1999
- [32] 王琪延. 從時間分配看北京人 20 年生活的變遷——基於 2006 年北京生活時間分配調查的統計分析[J]. 北京社會會科學, 2007, (5) : 22-26
- [33] 柴彥威. 中日城市結構比較研究[M]. 北京: 北京大學出版社, 1999。
- [34] Lenntorp B. Paths in space-time environments [J]. Lund Studies in Geography, Series B (44), Lund, 1976
- [35] Shekhar S. and Chawla S. Spatial databases: a tour [M]. Upper Saddle River, NJ: Prentice-Hall, 2002
- [36] Miller, H. J. Modeling accessibility using space-time prism concepts within geographical information system [J]. International journal of Geographical information systems, 1991, 5: 287-301
- [37] Forer P. Geometric approaches to the nexus of time, space and microprocess: implementing a practiceal model for mundane socio-spatial systems [A]. In Egenhofer M.J. and Golledge R.G. (Eds.). Spatial and temporal reasoning in geographic information systems. Oxford: Oxford University Press, 1998: 171~90
- [38] Kwan, M.P. and Hong X.D. Network-based constraints-oriented choice set formation using GIS[J]. Geographical System, 1998, 5: 139-62
- [39] Shaw, S-L and D. Wang. Handling Disaggregate Spatiotemporal Travel Data in GIS[J]. GeoInformatica, 2000, 4(2), 161-178.
- [40] Pred A. City systems in advanced economics: past growth, present process, and future development options [M]. London: Hutchinson, 1977
- [41] Miller H. Time geography measurement [J]. Geographical Analysis, 2005, 37: 17~45
- [42] 張純, 柴彥威, 李昌霞. 北京城市老年人的日常活動路徑及其時空特徵[J]. 地域研究與開發, 2007, Vol.26, No. 4: 116~120
- [43] 劉玉亭, 何深靜, 李志剛. 南京城市貧困群體的日常活動時空間結構分析[J]. 中國人口科學, 2005, S1 : 85~93



- [44] Kroes E.P. and Sheldon R.J. Stated preference methods: an introduction [J]. *Journal of Transportation Economics and Policy*, 1988, 22(1): 11~26
- [45] Fowkes T. and Wardman M. The design of stated preference travel choice experiments [J]. *Journal of Transportation Economics and Policy*, 1988, 22 (1) : 27~45
- [46] Polak J. and Jones P.M. The acquisition of pre-trip information: a stated preference approach [J]. *Transportation*, 1993, 20 : 179~198
- [47] Wang D., Oppewal H. and Timmermans H.J.P. Pairwise conjoint analysis of activity engagement choice [J]. *Environment and Planning*, 2000, A(32) : 805~816
- [48] Green P.E. and Srinivasan V. Conjoint analysis in consumer research: issues and outlooks [J]. *Journal of consumer research*, 1978, 5: 103~123
- [49] Wang D. Li S.M. Housing preferences in a transitional housing system: the case of Beijing, China [J]. *Environment and Planning A*, 2004, Vol.36: 69~87.

## **Activity-Based Approach to Human Spatial Behavior Research**

**Yanwei CHAI, Jie SHEN**

*Department of Urban and Regional planning, Peking University, Beijing 100871, China*

### **Abstract**

Since 1960s, along with the transition of developmental focus from economic issues to social issues, geographers realized that human spatial behavior was not as simple as they thought before. The knowledge of aggregate patterns of human spatial behavior helped little to solve new problems, and research addressing micro-level of individual behavior then became one of the main directions of geography.

Action space is the kernel subject of behavior geography. Related research puts individual in the context of urban environment and focuses on how they image and interact with the physical environment. As one important part of action space, activity spaces refer to the subset of all locations within which an individual has direct contact as a result of his or her day-to-day activities. They represent a process through which residents gain information about and attach meaning to our environment. What's more, researches on activity spaces integrated the four key problems of action space: the colligation of time and space, the behavioral mechanism of choice and constraints, the link between activity and travel, and the impacts of socio-economic structure.

As a result, such perspective has developed into an activity approach to individual and household travel-activity behavior as well as urban space analysis. Therein, activity patterns are defined by time budget, its location and related travel, and all residents' activity spaces constitutes urban activity system. Both of the two are the main research objects. As to methodology, three important items are mentioned. Time-space budget and time-geography are the most important analysis tools. Besides, recent-developed stated preference method has risen to help go deep into behavior studies.

In China, although such research has showed up to expanding the field, it is still far from well-developed both on theory and methodology. This paper thus tries to propose a research framework of action space based on daily activity analysis, which is more comprehensive than those of before. Theories of multi-disciplines are emphasized as the base of research, which are including geography, society, psychology, urban planning and urban transportation etc. Meanwhile, activity dairy survey, revealed preference and stated preference survey should be combined to acquire empirical data source, census data related with both socio-economic and spatial information will also be used to support the whole studies. In such framework, travel-activity patterns will be derived under specific time-space environment. The interaction mechanism between behavior and space will be then discussed considering both individual choice and constraints. Using new computation technique such as GIS etc, action space simulation is finally realized to help the establishment of relative policies.

**Keywords:** action space   activity space   activity-based approach   human activity approach

# **Conflict and Interaction: A Structural Equations Analysis of Relationships between Time Allocation and Travel Behaviour**

**Wenjia ZHANG<sup>1</sup>, Yanwei CHAI<sup>2</sup>**

<sup>1</sup>College of Urban and Environmental Sciences,  
Beijing, 100871 China  
Tel: 86-10-62757980  
FAX: 86-10-62751187  
Email: kavin\_121@yahoo.com.cn

<sup>2</sup>College of Urban and Environmental Sciences,  
Beijing, 100871 China  
Tel: 86-10-62757980  
FAX: 86-10-62751187  
Email: chyw@pku.edu.cn

## **Abstract**

Up until now, researches of individual time allocation and travel behavior have played a dominant role in transportation studies; however there exist many cases in which intrapersonal conflict and intra-household interaction cannot be ignored. The structural equation modeling methodology was applied to indentify the causal relationships between time allocation and travel behavior in the context of intra-household interaction using the data of Tianjin, China. The result shows that there primarily exists the family-work conflict in females' daily time allocation while inverse work-family conflict for males. In other words, Tianjin's male heads have more work stress while the female have more family stress. Moreover, the total effect indicate that when encountering the work-family conflict, male head seems to be more likely to orderly give up the time for leisure, family obligation and personal time with degressive possibility, while the female seems more likely to reduce the time for work activities than leisure activities. However, no matter what conflict the heads encounter, the work obligation will increase the travel behavior in terms of total travel time and numbers of trips, while the family obligation reversely reduce the travel time and numbers of trips. Further, there exist substitution, companion and complementary effects in activity time allocation and travel behavior between heads, but the effects of socio-demographics on them are all insignificant except the impact of the presence of children under 6 on female's personal maintenance.

**Keywords:** Activity-travel behavior; Structural equations model; Time allocation; family obligation; intra-household interaction

## **1. Introduction**

On a given day, in a given urban area, people should allocate time to various activities at different locations, yielding extremely varied and complex travel patterns. The complexity of urban activity-travel behavior arises from at least three sources. First, urban travel is a derived demand dependent upon activity participation. Second, the activity-travel behavior is constrained by the time and space caused by ability,

coupling and accessibility etc. Third, the activity demand allocates to a particular individual in some unit and the individual allocates various demands to different activities (Chapin, 1974; Hagerstrand, 1970; Pas, 1984; Chai etc., 2002). Know from other factors, the influence of household on travel behavior seems to receive high attention at all time. Because it is important and complicated for planning that the activity-travel behavior in the context of intra-household should either concern the result of demand of family obligation or some constraint such as work-family conflict and family-work conflict. Therefore, several studies consider activity-travel behavior as a function of socio-demographics which including many family attributes, nevertheless, ignoring the ambiguous relation of family's demand and constraint from family (e.g. Hanson and Hanson, 1986, Lu and Pas, 1999). On the other hand, although daily time allocation researches do not consider the time window when a certain activity is pursued, the duration that the activity lasts, and the sequences in which the activity is scheduled, it provides insightful understanding of individuals' trade-offs regarding time allocation within a fixed time budget, which include the time use of activity of family obligation often embodied in maintenance activity duration (Bhat and Koppelman, 1999; Lu and Pas, 1999).

However, this paper suppose the influence of household on individual's daily activity-travel behavior root in individual's daily obligations which eventually emerge in special activity and the daily activity-travel behaviors of other household members. Moreover, the socio-demographics characters such as life cycle and life style of family will sustainably influence the conventional activity participation and travel behavior. The purpose of this article is therefore to examine the relationship among individual's family obligation, time allocation and travel behavior in the background of intra-household interaction between household heads, using data from time-use survey data conducted in Tanjing, China. Specifically, the following questions are investigated: (1) how does the family and work obligation activity duration directly affects other activity duration and travel behavior in terms of daily trip numbers and travel time? (2) how do the individual allocate the activity-travel time when confronting the work-family conflict or family-work conflict in the background of intra-household interaction? (3) Do female head differ from male head in these respects above, and do the male's activity-travel behaviors impact female's behaviors? (4) Are background character (age and education), some family situation (income, household size, and children situation) and work situation (occupation) important determinants of family obligation and activity-travel behaviors?

The rest of this paper is organized as follows. In the next section, some previous research on the activity-travel behavior impacts of family obligation and intra-household. In Section 3, we provide a brief discussion of the source of the data used in this research and we describe the endogenous and exogenous variables included in the model. Section 4 introduces the methodology of structural equation modelling. Then follows a presentation of the results of the empirical analyses. The final section of the article discussed some possible interpretations and implications of the findings and lists future directions.

## **2. Research Reviews**

While several researchers have analyzed activity generation, duration, and frequency characteristics under the influence of family's demand, relatively fewer studies have made clear how family's demand is allocated to household members to produce

individual's family obligations, then how to corresponding activity-travel behaviors respectively under the intra-household interaction, and on which process the socio-demographics mainly impact. The research along the latter line of enquiry is discussed in this section.

## **2.1 Conflict of obligation**

In the past decades, many literatures examine person allocation to family obligation; some researchers have focused on allocation across different types of household members (such as male/female, head/spouse). Along this line, Simma and Axhausen (2001) examined the allocation of activities between the head of the household and spouse, and reported that person and activity related variables played an important role in the selection of the head or the spouse. Cao and Chai (2007) use the data collected from Shenzhen, China to confirm that: men are dominant in out-of-home activities contain primarily work-related obligation, while women dominate in-home activities contain primarily family obligation.

When you confront some family obligation, how would you do first? Maybe most of all you will allocate the time of family activity and other activity first. In fact, when allocating the activity time, some conflict will often emerge, such as work-family conflict (WFC) and family-work conflict (FWC). In detail, WFC emerges from job demands that interfere with performing home and family obligations (e.g., long work hours may prevent an individual from attending a special family occasion), and FWC stems from home and family obligations that interfere with carrying out job-related obligations (e.g., meeting with the child's teacher may prevent an individual from performing his or her duties in the workplace) (Osman and Lulu, 2006).

Travel and family-related stress touches on the more general question about conflicts between work obligations and family obligations — a question that has received increasing attention in research based on the role-based theory and stress, as well as in the public debate based on the view of sociology and psychology over the past two decades or so (Perry-Jenkins, 2000; Gustafson, 2006; Judge etc., 2006). In fact, there must be a balance point about activity participation. Gronlund (2007) conclude that the balancing of paid work and family is based on two essential hypotheses: the role-strain hypothesis and the expansion hypothesis. The role-strain hypothesis states that multiple roles create stressful conflict yielding stress but not meeting all expectation while contrarily the expansion hypothesis claims that multiple roles can serve as a buffer against stress (Goode, 1960; Sieber, 1974). The above two hypotheses have been competing for credibility and both have been supported by empirical research, although the contradictory results also suggest that the “either-or” argument of the two hypotheses has become increasingly irrelevant. Detailed empirical reviews refer Gronlund (2007).

In a large body of transportation literatures, activity-based approach, considering that activities derive from various role-based demand behind household activity system (Chapin 1974) while travel is a derived demand dependent upon activity participation (mainly out of home activity) , is widely used in the past decades. However, a crucial question is how to define ‘demands’. Sociologists seem to give out a ‘research phenomenon’ that whereas the theory speaks of a role conflict, empirical studies present the problem largely as a time conflict (Gronlund, 2007) while most

transportation researches have empirically used the concept of time allocation to explore the time use of activity participation under the constrained framework of Hagastarand's time-geography (1970), although primarily for the sake of investigating the travel behavior. By contrast, sociological and psychological studies focus on activity conflicts and role-based stress, mostly without regard to travel, especially normal trips and tours of activity (See Gustafson, 2006; Osman and Lulu, 2006; Kinnunen and Mauno, 1998). However, taking work activity as example, work-related travel is one aspect of work that may require time and availability beyond normal working hours, impact on the sequence activity and that may therefore interfere with family life and family obligation. Therefore, it maybe better to combine role-and-stress-based conflict of activity and derived travel behavior to explore the complex urban activity-travel system.

In transportation research, activities are often traditionally divided into three types based on individual's activity demand: subsistence (work), maintenance and recreation (Chapin, 1974; Golob and McNally, 1997), as well as two categories based on travel: in-home and out-of-home. However, though most studies of time allocation are based on the framework of household, considering person allocation and interaction, the family demand is less mentioned and the family obligation is still so undistinguishable that in fact how the family obligations affect the activity-travel behavior is still unambiguous. Therefore, if all the activities for family obligations are distinguished with other non-family obligations, especially considering the conflict with work obligation and personal obligation, the influence of family demand to individual's activity-travel behavior maybe more clear. Compared with the traditional categories, Zhang et al. (2005, 2006) classify activities into four categories: in-home activities, out-of-home personal (independent) activities, allocated activities and joint (share) activities. It means a personal activity is not a household task; an allocated activity is a household task that is assigned to a specific household member. And joint activities are those require the presence of all household members. Cilebe and Koppelman (2005) classify activity-based tours into five modes, considering the independent and joint activity stop and trips.

No matter how to classify the individual's activity, the intra-household interaction among different members seems to be the same important in activity-travel behavior analysis, which will be reviewed in the next paragraphs.

## **2.2 Intra-household interaction**

In most studies, an individual person is usually taken as the primary unit in the analysis of activity-travel behavior. However, in the process from family demand to activity-travel behavior, the mechanisms may work different for different household members, i.e., the family obligation will allocate to different members. Moreover, one's process will be influenced by the other members'. For example, as the wife in a nuclear family is cooking, the husband may have to pick up the kids and do some shopping for family by the way.

Nevertheless, many studies have pay attention to the gender-role based difference in activity-travel pattern, but previous research shows no consistent results in this respect. Roehling and Bultman (2002) found that women travelled less if they had children, whereas no such pattern appeared among men; Presser and Hermsen (1996) found no significant impact of family factors (marital status, presence and age of children) on

either women or men. Both these studies concerned overnight work-related travel in the USA. Studies by Jones et al. (1983), and Kitamura et al. (1996) found that when children are added to the household, both men and women tend to reduce their leisure activity: however, women typically assume primary responsibility for childcare and maintenance activities and reduce their participation in out-of-home work. Men tend to work longer hours to compensate for the reduction in income, but usually do not change their maintenance activity participation.

Moreover, a number of studies have pointed to understanding intra-household interaction not only just considered the role-based differences. Along this line, works are mostly focused on intra-household time allocation between activity types and household members. Much less effort was made on understanding and modelling of generation of activity episodes, trips, and travel tours (Bradley and Vovsha, 2005). In particular, The simultaneous equation models including Golob (1999), Golob and McNally (1997), Lu and Pas (1999), Fujii et al. (1999), Meka et al. (2002), Simma and Axhausen (2001) and Cao and Chai (2007) have studied the time allocation between various types of activities and household members. In particular, many data empirically prove there exist substitution, companion, and complementary effects for three types of activities, allocation of different obligation to male/female head, as well as interaction in time use between male head and female head (Golob and McNally, 1997; Lu and Pas, 1999; Cao and Chai, 2007). Lu and Pas (1999) pay more attention on the relationship between in-home and out-of-home activities. At last, even all studies will give out travel behavior as a function of activity participation. With different categories, Zhang et al. (2005) give out household-level utility models of activity-travel demand to empirically confirm that nearly half of the households the husband mostly influences task allocation and time use, for one-fifth of the households it is the wife and the remaining households show an equal relative influence for the husband and wife.

Though the holistic works above provide valuable insights into the intra-household decision-making mechanism they do not directly address requirements of the structure of travel demand models that are based on discrete units of travel and discrete choice modelling technique. Several types of research have explored the household activity analysis with an explicit consideration of intra-household interactions. They include micro-simulation models, rule-based models, and utility-maximizing models (detailed reviews see Bradley and Vovsha, 2005; Pribyl and Goulias, (2005); Kato and Matsumoto, 2007; Bhat and Pendyala, 2005). These models essentially present the process of intra-household decision-making mechanism. However, the complex relationship, such as conflict and interaction of time allocation may be not easy to explore. Maybe, all the models have their own advantage, whereas noting can involve all. Just as Bhat and Pendyala (2005) said, “much remains to be explored and learnt in this fertile area of inquiry”.

Overall, despite of the drawbacks, the recent attempts have demonstrated that the holistic approach of studying the relationships between family obligation, time allocation and travel behavior in the context of intra-household interaction is a promising avenue towards a better understanding of the conflict between family obligation and others, and their influences on activity-travel behavior, which is largely due to limited research in this area. Further, the data used in these studies exclusively came from the United States and Europe. Since China account for about a quarter of

world population and have different cultures from western countries, previous findings explain only more than half of the story. Therefore, time allocation and travel behavior research using the data from those developing countries will further shed light on our understanding of activity-travel behavior.

### 3. Data

#### 3.1 Data source

The data used in this study come from a two-day time-use diary survey conducted in Tianjin on Sunday and Monday in middle July, 1997. Tianjin is located in the northeastern part of the North China Plains and adjacent to Beijing. It is a traditional Chinese city while nowadays is in the stage of old city reconstruction and suburbanization. Using the data from National Census and other statistics such as the location and age of neighbourhoods and design of housing, and through site surveys, we screened potential residential neighbourhoods to ensure that they represent different geographical districts. We selected two neighbourhoods inside the urban core and three neighbourhoods in the suburb of Tianjin along three outspread orientations, as shown in Figure 1. We randomly surveyed 100 households for each neighbourhood. Both male household head and female household head were asked to complete the questionnaire. The number of responses totaled 459, yielding a 91.8% response rate. However, since some households provided information of one adult member and not all respondents reported activity records, the sample used in this study reduces to 267 households while we just concern the behavior in weekdays. Refer to Chai et al. (2002) for a detailed description of resident characteristics.



Figure 1. Geographical Location of Neighbourhoods  
(Concentric Outspread in Five orientations of the Residential Space in Tianjin City)

#### 3.2 Modeling variables



The exogenous variables in this analysis can be classified into three categories: background characteristics, family situation and work situation (Table 1). Background characteristics involve the age and education degree of household heads. Family situation include household size, monthly income of household, the presence of Children under 6, and the presence of Children from 7 to 18. There are most of all residents living in the private house so that we do not consider the variable of the type of housing, as well as the availability of vehicles, which is much more missing in the questionnaires. The last work situation involve the male's and female's occupation, including the employed and the unemployed.

Enlightened by the above research reviews, various obligations are captured by the amount of time spent on each of a set of activity categories reflect the obligation from family, individual, work and leisure. Following the practice of previous studies (e.g., Zhang et al. 2005; Golob and McNally 1997), we regroup the activities into four categories: work, family maintenance, personal maintenance and leisure, detailed should be referenced as Table 2. All the categories include the in-home and out-of-home activities as a whole to explore the conflict and interaction.

Table 1. Exogenous and sample characteristics

Variable	No.	Valid rate	Variable	No.	Valid rate
<i>Background characteristics</i>					
<b>Age</b>	<b>488 individuals</b>	<b>91.4</b>	<b>Education</b>	<b>511 individual</b>	<b>95.7</b>
21-30	26(5.3)		Elementary or junior high school	149(29.2)	
31-40	183(37.5)		Senior high school	203(39.7)	
41-50	197(40.4)		College degree and above	159(31.1)	
51-60	64(13.1)				
61+	18(3.7)				
<i>Family situation</i>					
<b>Household size</b>	<b>258 households</b>	<b>96.6</b>	<b>Monthly Income (RMB)</b>	<b>259 households</b>	<b>97.0</b>
2	8(3.1)		<1k	133(51.4)	
3	149(57.8)		1k~3k	74(28.6)	
4	57(22.1)		3k+	52(20.1)	
5	30(11.6)				
6+	14(5.4)				
<b>Children(&lt;6)</b>	<b>267 households</b>	<b>100.0</b>	<b>Children(7~18)</b>	<b>267 household</b>	<b>100.0</b>
presence	28(10.5)		presence	151(56.6)	
absence	239(89.5)		absence	116(43.4)	
<i>Work situation</i>					
<b>Male's Occupation</b>	<b>248 individuals</b>	<b>92.9</b>	<b>Female's Occupation</b>	<b>238 individual</b>	<b>89.1</b>
Unemployed	10(4.0)		Unemployed	23(90.7)	
Blue collar	143(57.7)		Blue collar	114(47.9)	
While collar	95(38.3)		While collar	101(42.4)	

Note: The numbers in parentheses are percentages.

Table 2. Activity categories in this study

Activity category	Activity types recognized in dairy survey in Tianjin
-------------------	--

Work	Work Wok-related
Family maintenance (Fmai.)	Daily grocery, market and superstore Taking care of the older and babysitting Home-based work such as cooking, cleaning, and yard work
Personal maintenance (Pmai.)	Personal business and other non-leisure activities Meals, bath, hair-cutting etc. Visiting post office and bank, chauffeuring, medical visit etc. window shopping, library, book store etc.
Leisure (Leis.)	Reading, TV/movie, music, game Sport, chatting, social visit bring etc. Scenery watching, social and club activities

Note: The numbers in parentheses are abbreviation.

Source: Chai et al. (2002)

#### 4. Methodology

In order to estimate a simultaneous model of the interrelationships among socio-demographics, time allocation to obligation and travel behavior, the methodology of structure equation model (SEM) is applied in this research, which will fulfill our interest in including the direct and indirect effects of one variable on another. Golob has pioneered the application of this methodology in the transportation field, and together with his colleagues he has used it to address a wide variety of transportation problems (see the review of Golob, 2003; and Lu and Pas, 1999).

Structural equations modeling with observed variables are defined by the system:

$$y = By + \Gamma x + \zeta \quad (1)$$

Where

$y = (m \times 1)$  column vector of endogenous variables ( $m$ = number of endogenous variables). In this studies,  $m=12$ . Besides the time allocation of four activity of two heads labeled in Table. 2, two define travel behavior in terms of daily total number of trips and total travel time is involved in the endogenous model.

$x = (n \times 1)$  column vector of exogenous variables ( $n$ = number of exogenous variables). In this studies,  $n=9$ . All the variables are presented in Table 1, except the female's age, because it is highly correlation with the male's age in the samples, which will easily conclude the nonpositive definite covariance matrix.

$B = (m \times m)$  matrix of coefficients representing the direct effects of endogenous variables on other endogenous variables,

$\Gamma = (n \times n)$  matrix of coefficients representing the direct effects of exogenous variables on endogenous variables, and,

$\zeta = (m \times 1)$  column vector of errors.

The hypothetical causal relationships among endogenous variables and between exogenous and endogenous variables are depicted in Figure. 2. We theoretically hypothesize that the activity categories reflect all the information of obligation, and there exist the conflict between different obligation of individual and the interaction between the household heads. In practise, we detect the direct effect between different time-use and different role. The direction of conflict between work and family should be test so we use the double-arrow to figure. As most transportation studies, we have to find the relationships between time allocation and travel behavior, but here, we just focus on the influence of work obligation and family obligation. The soci-

demographics, including the background characteristics, family situation and work situation, will run true to form the determinants of time allocation and travel behavior.

Golob and McNally (1997) conclude in situation where low sample size prevents application of the Tobit model estimated using ADF-WLS, the linear model estimated using the normal theory maximum likelihood (ML) method will provide decent approximation. Though some variables cannot fulfill the normal distribution assumption (Table. 1), the ML method will be still used in this 267 sample case studies. Because some exogenous variables in this data contain missing vales and involve continuous and categorical variables (Table. 1), we will first use the expectation-maximization (EM) arithmetic to derive the covariance matrix, then use the ML approach to estimate the model. Though the flow diagram among the exogenous is not concerned (i.e. fix the covariance matrix of exogenous  $x$ ), here we freely estimate nine error-term variances of  $x$  (diagonal elements in the  $\Theta_\delta$ ) in the interest of the measure error of the exogenous variables (Hau et al., 2006). The LISREL software is used to estimate the model described above.

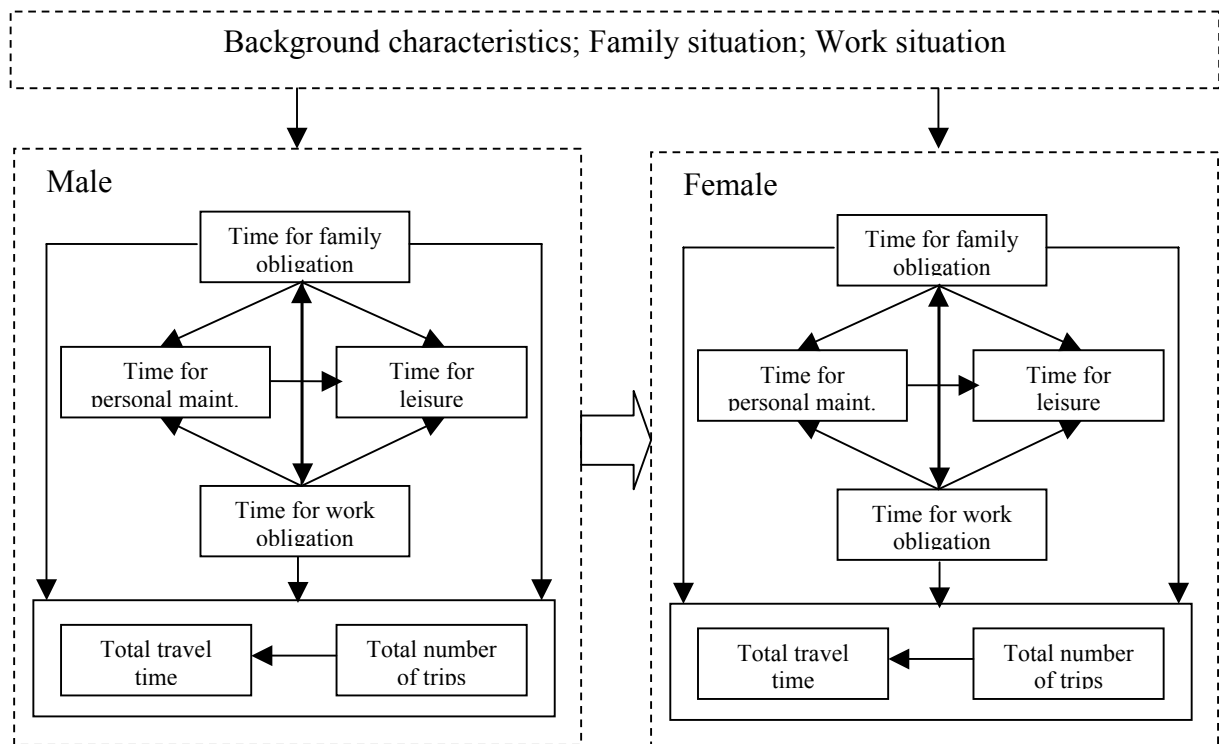


Figure. 2 Hypothetical direct effects among soci-demographics, time allocation and travel behavior of two household heads

## 5. Findings and interpretations

The independent model has a chi-square value of 409.91 with 120 degrees of freedom. The  $\chi^2$  value of the estimated model is 20.20 with 96 degrees of freedom. The estimated model significantly improves the independent model ( $p=1.00$ ). Various goodness-of-fit measures, such as RMSEA=0.00 ( $p=1.00$ ), GFI=0.9929, and CN=1726, also indicate the model fit is good. Table 3 and Table 4 lists the effects among intrapersonal endogenous variables of male and female heads, i.e., the total, direct and indirect effects among time allocations to different obligation and travel behavior. Table 5 presents the effects among endogenous variable between two heads

to explore the intra-household interaction. The test of this section will explain the results listed in these tables. The sign of the relevant coefficient estimates indicate the direction (causality) of the effects.

### 5.1 Intrapersonal conflict and travel behavior

In the context of intra-household interaction, we gain the gender-role based relationships between time allocation and travel behavior, as show in Table 3 and Table 4. The results offer some logical and consistent findings as well as some gender-role based difference. With respect to intrapersonal time allocation, relationships among male's and female's obligations seems to be a lot of difference. As show in Table 3, men's work activity duration significantly influence family maintenance activity duration, personal maintenance activity duration, and leisure activity leisure activity duration; meanwhile, all the direct effect is negative, which conclude the substitution of four types of activity and conflicts among the different obligations. Though the family activity duration may reduce the time for personal activities and leisure activities, all parameters are insignificant, as the same in the direct effect from male's personal activity duration to leisure activity duration. It means the dominant activity allocate to male head is work-related activity while the men take the paid work obligation as their leading responsibility. Therefore, men's daily time allocation is imbued with work-family conflict. By contraries, women's work activity duration do negatively influence other three activity duration, but even all the effect is insignificant except the leisure activity duration. However, family obligations, substituting the status as men's work stress, significantly dominate the other activity duration (Table 3). These findings are consistent with Bjornbrg (2002) on Sweden and Duncan et al. (2003) on Britain and Cao and Chai (2007) on Shenzhen that women are still often expected to take the main responsibility for home and family. In particular, Above all, we can conclude the gender-based difference in the context of intra-Tianjin's-household interaction: there primarily exists the family-work conflict in women's daily time allocation while inverse work-family conflict in men's daily time allocation. In other words, Tianjin's male heads have more work stress while the female have more family stress.

Moreover, how do the heads allocate the time when confronting the work-family conflict or family-work conflict? We have to consider the total effects and t-value of the coefficients. For male head, supposed to increase one hour in work duration, he tend to reduce 15 minutes ( $0.2511 \times 60$ ) for family activities while this flexibility is rejected to be zero with a great probability ( $t = -4.4350$ ), i.e., he has a great probability to reduce his family activity duration. Similarly, he has more probability to reduce the time for leisure activities when meeting the work-family duration ( $t = -4.6522$ ), whereas has the least probability to personal activities ( $t = 3.3901$ ). Comparatively, when female head encounter the family-work conflict, she will

Table 3. Total, direct and indirect effects between endogenous of household male head

	MWork.	MFmai.	MPmai.	MLeis.	MTrav.	MNtri.
MWork. Total		--				
Direct		--				
Indirect		--				
MFmai. Total	-0.2511***					

	Direct	-0.2511***		
	Indirect	-0.2511***		
MPmai.	Total	-0.1088**	-0.1774	
	Direct	-0.1533*	-0.1774	
	Indirect	-0.9347	--	
MLeis.	Total	-0.3462***	-0.2751	-0.0923
	Direct	-0.4294***	-0.2915	-0.0923
	Indirect	0.0832	0.0164	--
MTrav.	Total	0.0794***	-0.1244**	19.2387***
	Direct	0.0482**	--	19.2387***
	Indirect	0.0312**	-0.1244**	--
MNtri.	Total	0.0016**	-0.0065**	
	Direct	--	-0.0065**	
	Indirect	0.0016**	--	

Note: ‘\*’: significant at 0.10 level; ‘\*\*’: significant at 0.05 level; ‘\*\*\*’ significant at 0.01 level  
decrease the work activity duration in the more probability ( $t=-5.2596$ ) and reduce the leisure in the less ( $t=-3.2444$ ). However, she will increase the time for personal activities instead with a high probability ( $t=-4.7821$ ). As a statistically imaginabile interpretation, Tianjin’s male heads have great stress in work and family, when encountering the work-family conflict, they seems to be more likely to give up the time for leisure, and then have to occupy the time belong to family obligation, at last squeeze the personal time with least possibility. Compared with the high-stress male, the female heads seem to be a little less. When spending more time on family obligation, they still have time to increase the personal activity duration. In case they confront the family-work conflict, they will be more likely to reduce the time for work activities than leisure activities.

Table 3 and Table 4 show the total, direct and indirect effects of time allocation to work and family obligation on travel behavior. With respect to intrapersonal travel behavior, men’s and women’s work activity duration positively directly influences their respective daily total travel time (*abbr.* Trav), but the women’s parameter is insignificant, implying that man’s work activity participation significantly increase the travel time. Further, more times spent for family maintenance activities significantly reduce the number of trips (*abbr.* Ntri) and travel time. This finding is in support of previous studies though most of them just consider the out-of-home activities (Lu and Pas, 1999; Wang and Law, 2007). We may conclude that the work obligations may lead to more time out of home and more time on the road, whereas the family obligations bring more time in home, and less frequencies and times to travel.

Table. 4 Total, direct and indirect effects between endogenous of household female head

	FWork.	FFmai.	FPmai.	FLeis.	FTrav.	FNtri.
FWork. Total		-0.8402***				
Direct		-0.8402***				

	Indirect		--	
FFmai.	Total	--		
	Direct	--		
	Indirect	--		
FPmai.	Total	-0.0300	0.4230***	
	Direct	-0.0300	0.3978***	
	Indirect	--	0.0252	
FLeis.	Total	-0.3845**	-0.2651***	-0.2162
	Direct	-0.3910***	-0.5022**	-0.2162
	Indirect	0.0065	0.2370	--
FTrav.	Total	0.0421	-0.1714***	17.5624***
	Direct	0.0421	--	17.5624***
	Indirect	--	-0.1714***	--
FNtri.	Total	--	-0.0077***	
	Direct	--	-0.0077***	
	Indirect	--	--	

Note: ‘\*’: significant at 0.10 level; ‘\*\*’: significant at 0.05 level; ‘\*\*\*’ significant at 0.01 level

## 5.2 Interaction between heads

In the context of the conflicts between work obligations and family obligations, some direct and indirect effects between male head and female head are shown in Table 5. Male’s times for work, family, personal and leisure activities positively impact on female’s corresponding times for work, family, personal and leisure activities, but all parameters are insignificant except the personal activity. In particular, when man increases times for personal maintenance activities, his spouse will spend more time on personal activities too. It seems that though for the sake of the personal obligation, there exist some interactions between the heads, e.g., together for meals. Further, the co-interactions between male’s four activities and female’s present negative indirect effects to depict the substituted relationship between gender-role based time allocation. This is mostly consistent to the finding of the studies by Golob and McNally (1997), Cao and Chai (2007) and Zhang (2007).

Apart from the interaction of activity duration, Table 5 also lists the relationships between male’s travel behaviour and female’s. Increasing the travel time of male may reduce the propensity to travel, nevertheless, the parameter is insignificant, implying that male’s travel time does not significantly impact on female’s travel time. However, male’s number of trips significantly influences the female’s travel behavior including the travel time and No. of trips. The coefficients are all positive. Besides, male’s work and family activities duration insignificantly indirectly affect the female’s travel behavior.

Table 5. Total, direct and indirect effects between endogenous of heads

	MWork.	MFmai.	MPmai.	MLeis.	MTrav.	MNtri.
FWork. Total	0.1058	-0.0247				

	Direct	0.0996	--			
	Indirect	0.0062	-0.0247			
FFmai.	Total	-0.0074	0.0294			
	Direct	--	0.0294			
	Indirect	-0.0074	--			
FPmai.	Total	-0.0375	-0.0387	0.2882*		
	Direct	--	--	0.2882*		
	Indirect	-0.0375	-0.0387	--		
FLeis.	Total	-0.074	-0.0321	-0.0741	0.1283	
	Direct	--	--	--	0.1283	
	Indirect	-0.074	-0.0321	-0.0741	--	
FTrav.	Total	0.0147	-0.0435		-0.0077	5.9519**
	Direct	--	--		-0.0077	--
	Indirect	0.0147	-0.0435		--	5.9519**
FNtri.	Total	0.0006	-0.0025			0.3474***
	Direct	--	--			0.3474***
	Indirect	0.0006	-0.0025			--

Note: ‘\*’: significant at 0.10 level; ‘\*\*’: significant at 0.05 level; ‘\*\*\*’ significant at 0.01 level

### 5.3 Influence of soci-demographics on obligation and travel

The effects of socio-demographics on time allocation of various obligations and travel behavior in terms of number of trips and travel time are all insignificant except the impact of the presence of children under 6 on female’s personal maintenance. This finding is something strange to previous research about activity-travel behavior (e.g., Lu and Pas, 1999; Golob and McNally, 1997). One of the reasons may be that there is a little big missing data in the exiguous variables. However, we can only derive that having young children especially influence the time allocation of female, in particular, significantly directly influence the personal obligation allocation, whereas there is no consistent such effect among male. These findings seem to find more in the work-family research (Gustafson, 2006; Presser and Hermsen, 1996).

## 6. Concluding discussion

Up until now, researches of individual time allocation and travel behavior have played a dominant role in transportation studies; however there exist many cases in which intrapersonal conflict and intra-household interaction cannot be ignored. The structural equation modeling methodology was applied to indentify the causal relationships between time allocation and travel behavior in the context of intra-household interaction using the data of Tianjin, China. In an attempt to distinguish the obligation of family and work, this paper empirically classified the activity participation into four types, respectively, work indicate work obligation, family maintenance activity indicate family obligation, personal maintenance activity indicate personal obligation and leisure activity. As a result, there primarily exists the family-work conflict in female’s daily time allocation while inverse work-family conflict in male’s daily time allocation. In other words, Tianjin’s male heads have more work stress while the female have more family stress. This finding provides further evidence on the intrapersonal conflict with time allocation. Afterwards, the

total effect indicate that when encountering the work-family conflict, male head seems to be more likely to give up the time for leisure, then have to occupy the time for family obligation, at last squeeze the personal time with least possibility, while the female heads seem still have time to increase the personal activity duration, and will more likely to reduce the time for work activities than leisure activities in case they confront the family-work conflict. Further, no matter what conflict the heads encounter, the work obligation will increase the travel behavior in terms of total travel time and numbers of trips, while the family obligation reversely reduce the travel time and numbers of trips.

This study provides another justification for the household-level analysis to studying the intra-household interaction between Tianjin's male heads and female heads. Globe and McNally (1997) and Cao and Chai (2007) argued that there exist substitution, companion and complementary effects between heads. Here, this paper give out the companion and complementary interaction occur to the same activities from male heads to female heads, whereas co-activities have the substitution effect between heads. Moreover, male's number of trips significantly positively influences the female's travel behavior. Besides, the effects of socio-demographics on time allocation and travel behavior are all insignificant except the impact of the presence of children under 6 on female's personal maintenance. This finding provides some evidence for evaluating the influence of socio-demographics.

The present study may be extended in number of ways in future. First, for more detail, we need to classify the activity categories into in-home and out-of-home, though this study expects to catch the holistic characters of time allocation of activity participation. Second, more household members should be considered in the model to capture more information of intra-household interaction. Third, study the relationships between socio-demographics and activity-travel behaviors should be presented more variables respect the socio-demographics and travel behaviors. Fourth, it is better to make clear the process of intra-household decision-making mechanism in view of intrapersonal conflict.

## **7. Acknowledgements**

Project is supported by National Natural Science Foundation of China. (No. 40671058)

## **8. References**

- Bhat,C.R. and F.S.Koppelman, 1999, A conceptual framework of individual activity program generation. *Transportation Research A* ,27(6), pp.433~446
- Bhat,C.R. and R.M.Pendyala, 2005, Modeling intra-household interactions and group decision-making. *Transportation*, 32, pp.443~448.
- Bradley, M., and P. Vovsha. 2005, A Model for Joint Choice of Daily Activity Pattern Types of Household Members. *Transportation*, Vol. 32, pp. 545-571.
- Cao,Xinyu. and Yanwei Chai. 2007. Gender-role based differences in time allocation: A case study of Shenzhen, China. Paper presented at the 87st Annual Meeting of TRB, Washington, D.C.
- Chai, Y., Liu, Z., Li, Z., Gong, H., Shi, Z., and Wu, Z. 2002. Time-Space Structure of Chinese Cities (In Chinese). Beijing, China: Peking University Press.
- Chapin,F.S., Jr. 1974. *Human Activity Patterns in the City*. New York: John Wiley&Sons, Inc



- Fujii S, Kitamura R & Kishizawa K, 1999, An analysis of individual's joint activity engagement using a model system of activity-travel behavior and time use. Paper presented at the 78<sup>th</sup> annual conference of the Transportation Research Board, Washington, D.C.
- Gliebe, J.P. and F.S. Koppelman. 2005. Modeling household activity-travel interactions as parallel constrained choices. *Transportation*, 32:449~471
- Golob, T.F. 1999. A simultaneous model of household activity participation and trip chain generation. *Transportation Research B*, 34:355~376
- Golob, T.F. 2003. Structural equation modeling for travel behavior research. *Transportation Research B* 37:1~25.
- Golob, T. F., and M. G. McNally, 1997, A Model of Activity Participation and Travel Interactions between Household Heads. *Transportation Research Part B*, Vol. 31, No. 3, pp. 171-194.
- Gronlund, A. 2007. More control, less conflict? Job demand-control, gender and work-family conflict. *Gender, Work and Organization*, 14 (5): 476~487
- Gustafson, P. 2006. Work-related travel, gender and family obligations. *Work, employment and society*, 20(3): 513~530.
- Hagerstrand, T. 1970. What about people in regional science? *Papers of the Regional Science Association* 24: 7~21
- Hanson, S. and Hanson, P. 1981. The Travel-activity patterns of urban residents: dimensions and relationships to sociodemographic characteristics. *Economic Geography*, 57(4): 332~347.
- Hau, K-T, Zhonglin, Wen, Zijuan, Cheng. 2006. Structural equation model and its applications (In Chinese). Beijing: Educational Science Publishing House.
- Judge, T.A., Ilies, R. and Scott, B.A. 2006. Work-family conflict and emotions: effects at work and at home. *Personal Psychology*, 59: 779~814.
- Jones, P.M., M.C. Dix, M.I. Clarke and I.G. Heggie. 1983. Understanding travel behavior. Aldershot, UK: Gower Publishing Co., Ltd.
- Kato, H and M. Matsumoto. 2007. Intra-household Interaction Analysis among a Husband, a Wife, and a Child using the Joint Time-Allocation Model. Paper presented at the 87<sup>th</sup> Annual Meeting of TRB, Washington, D.C.
- Kinnunen, Ulla and Mauno, Saija (1998) Antecedents and outcomes of work-family conflict among employed women and men in Finland, *Human Relations*, 51, 2, 157-77.
- Kitamura R (1996). Applications of models of activity behavior for activity based demand forecasting. In Engelke LJ (ed.), *Activity-based travel forecasting conference proceedings*, College Station, Texas: Texas Transportation Institute.
- Lu, X., and E. I. Pas. 1999, Socio-demographics, Activity Participation and Travel Behavior. *Transportation Research Part A*, Vol. 33, No. 3, pp. 1-18.
- Meka, S., R. Pendyala, and M. Kumara. 2002. A Structural Equations Analysis of Within-household Activity and Time Allocation between Two Adults. Presented at 81<sup>st</sup> Annual Meeting of the Transportation Research Board, Washington, D.C.
- Osman, M.K and Baddar, L. 2006. An empirical study of the selected consequence of frontline employees' work-family conflict and family-work conflict. *Tourism Management*, 27:1017~1028
- Pas, E.I. 1984. The effect of selected sociodemographic characteristics on daily travel-activity behavior. *Environment and Planning A*, 16:571~581
- Perry-Jenkins, M., Repetti, R.L. and Crouter, A.C. (2000) 'Work and Family in the 1990s', *Journal of Marriage and the Family* 62(4): 981-98.

- Presser, H.B. and Hermsen, J.M. (1996) 'Gender Differences in the Determinants of Work-Related Overnight Travel among Employed Americans', *Work and Occupations* 23(1): 87–115.
- Pribyl, O. and K.G. Goulias. 2005, Simulation of Daily Activity Patterns. In: H.J.P. Timmermans (ed.), *Progress in Activity-Based Analysis*, Pergamon, Oxford, pp.43-66.
- Roehling, P.V. and Bultman, M. (2002) 'Does Absence Make the Heart Grow Fonder? Work-Related Travel and Marital Satisfaction', *Sex Roles* 46(9/10): 279–93.
- Simma, A., and K. W. Axhausen.2001, Within-household Allocation of Travel–The Case of Upper Austria. In *Transportation Research Record: Journal of the Transportation Research Board*, No. 1752, TRB, National Research Council, Washington, D.C., pp. 69–75.
- Wang, Donggen and F.Y.T.Law. 2007. Impacts of information and communication technologies (ICT) on time use and travel behavior: a structural equations analysis. *Transportation*, 34: 513~527.
- Zhang, J., H. Timmermans, and A. Borgers. 2005, A Model of Household Task Allocation and Time Use. *Transportation Research Part B*, Vol. 39, pp. 81-95.
- Zhang, J., and A. Fujiwara. 2006, Representing Household Time Allocation Behavior by Endogenously Incorporating Diverse Intra-household Interactions: A Case Study in the Context of Elderly Couples. *Transportation Research Part B*, Vol. 40, pp. 54-74.
- Zhang, W. 2007. Models of intra-household interaction: the activity-travel behavior analysis in the context of activity-based approach (In Chinese), B.A. dissertation. Nanjing University.

## **Household Members' Time Allocation to Daily Activities and Decision to Hire Domestic Helpers**

**Donggen WANG, Jiukun LI**

*Department of Geography, Hong Kong Baptist University, Kowloon Tong, Kowloon,  
Hong Kong, China*

### **Abstract**

Household maintenance such as childcare not only induces activities and travel but also impose time constraints on individuals' participation in other activities and travel. Instead of sharing household responsibilities, households may hire domestic helpers for household maintenance. Alternatively, they may get helps from members of the extended family such as parents of household heads. This paper develops a model to analyze households' tradeoffs between hiring domestic helpers for household maintenance and taking these responsibilities by household members. We will apply household economic theories to develop a time allocation model incorporating interactions among household members. We assume that households trade off the money they are willing to spend for hiring helpers with the time they may need to spend for household maintenance activities to maximize utilities, subject to time constraints. The model may be used to analyze the impacts of domestic helpers on household members' time allocation to subsistence, maintenance and recreation activities. It may also be applied to analyze the impacts of government policies regarding the minimum salary of domestic helpers and the change of household members' wage rates on households' decision to hire helpers. The paper extends the current literature on intra-household activity-travel interactions by considering external helps from domestic helpers, which may contribute to the understanding of activity-travel patterns of household members.

## 2010年上海世博會場內人流模擬分析

王德 馬力 朱瑋

*同濟大學建築與城市規劃學院*

### 摘要

本文以上海世博會協調局公布的會場規劃方案為基礎，通過因特網獲得虛擬參觀路線的調查數據，建立包含距離、是否相鄰、是否具有特色、大小、是否沿江、是否同岸、已參觀次數等變量的參觀者參觀目的地選擇的多項分對數離散模型，取得較好的效果。研究進一步對參觀者的行為特征進行定量分析和歸納，並運用模型進行模擬，揭示了參觀行為的規律，揭示了參觀人次、人流在空間上的產生的不均衡問題，並針對問題提出具體展館布局調整的建議。

**關鍵詞** 世博會 離散選擇模型 特征路徑人次分布 模擬 參觀

### **Research of Pedestrian Flow in the World Expo 2010 Shanghai Based on Internet Survey**

**De WANG, Li MA, Wei ZHU**

*College of Architecture and Urban Planning, Tongji University*

### **Abstract**

Based on the virtual World EXPO 2010 visiting internet survey data which provides a visual Shanghai for respondents to visit. The basic features of the visiting behaviors in the Expo are gotten from the survey. Then we build up a multinomial discrete choice model to study the visiting features further, like typical route and visiting preference and so on. Through simulating one day visiting, we find out the unbalance of visits distribution and pedestrian flow in the exhibition area, Further we provide some suggestions to improve based on it.

**Keywords:** World EXPO 2010 Shanghai, multinomial discrete choice model, typical route, distribution of visitors, simulate, visit, pedestrian flow

## Characteristics Changes in Disparity of Urban Transportation Development Level Rank in China

Xiaoshu CAO<sup>1</sup>, Limin ZHANG<sup>2</sup>, Desheng XUE<sup>1</sup>, Dapeng WANG<sup>1</sup>

1. *School of Geography and Planning, Sun Yat-sen University, Guangzhou, P. R. China,*
2. *Guangzhou Kecheng Planning & Survey Technological Co. Ltd. , Guangzhou, P. R. China*

### Abstract

This paper selects the statistics of 183 cities in China, in the year of 1991,1995,1999,2003. We adopt the Natural Breaks with Arcmap software to divide these cities into 5 ranks according to the their urban transportation development levels, and use the SPSS to analyse the development level rank disparity change which characterizes the spindle structure—the plus number of the cites which are better and worse than the average level is less than 32% of the total. Meanwhile, more than 68% cities' transportation development levels are close to the average one. Cities with higher urban transportation development level than average present the characteristics of “centralized – decentralized – decentralized – centralized ” in the provincial spatial distribution, while cities with lower level than average present the decentralized and ruleless spatial pattern. The disparity of the urban transportation development level rank in China appears the U-shaped change—it decreased in 1991-1995, increased in 1995-1999, and then decreased in 1999-2003 again, but the fluctuation range was not great in each period. Cities of which the urban transportation development level goes up spatially centralized in Henan , Shandong, Jiangsu, and Liaoning, while cities which had the degressive development level spatially centralized in Heilongjiang, Jilin, Shanxi, Hubei and Hunan. Applying to the relative analysis it can be found that, in China, there exists a significant positive correlation between the development levels of urban transportation and economy. At the same time, the economic structure is relevant to the urban transportation development level, in 1991-2003, the urban transportation development level exhibited distinct correlation with the gross industrial output value per capita at 0.01 level, and the correlation coefficient took on the ascending trand.

**Keywords:** urban transportation; spatial disparity; development level rank; China

## Social and Consumption Spaces

## Emerging Landscapes of Consumption in China: Independent Retail, Urban Form and Urban Life in Post-Reform Beijing

Nadia SBAlHI, Pierre GAUTHIER

*Department of Geography Planning and Environment, Concordia University,  
Montréal Canada*

### Abstract

This paper presents results from an ongoing research that looks at the impact of the development of independent retail on Chinese urban landscape and culture. A case-study in Beijing, informed by retailing geography, the study of urban form (i.e. urban morphology) and the study of everyday practices focuses on the rapid development of independent retail shops, often built at the immediate periphery of large walled housing estates. The authors posit that these changes to the cityscape are denotative of the profound transformations that affect the Chinese society in this post reform era. The creation of *landscapes of consumption*, in both literal and figurative senses, marks the advent of new urban cultural models expressed in the materiality of the city itself (i.e. in *places*) as well as in the everyday practices of the urban builders and dwellers. The city's residential compounds and their adjoining commercial strips are the projection in concrete forms of the social, cultural and economic conditions that have influenced and determined their creation. The built environment in the making is a disputed field of opportunities and constraints in which various groups of agents collide or cooperate. *Upstream*, groups, which have the ability to mobilise the proper resources, interact to manufacture the material city. *Downstream*, groups of users, the lay urban dwellers, create *space*, as, through their daily practices and casual interactions with the built environment, they collectively develop new habits and mental representations that confer meaning to the otherwise inert artefacts. Drawing on abundant data derived from an array of empirical procedures, the authors document and interpret the recent development of local commercial streets and discuss their cultural significance. The focus is on: 1. the development and building practices of the agents of morphological change (in order to reconstruct the building provision structure); 2. the built landscape itself, and finally; 3. the commercial street's users behaviours, practices and perceptions. Situated at the intersection of the privatization of land use rights, the development of mass consumption, and the disbanding of old communitarian living arrangements, the new landscapes of consumption are in many regards the embodiment of a post-communism Chinese ethos.

## **Night-time Consumption Spaces and Urban Renewal: Construction of the Baietan Bar-street in Fangcun, Guangzhou**

**Matthew M. CHEW**

*Department of Sociology, Hong Kong Baptist University, Kowloon*

### **Abstract**

One of the most intriguing development in the urban landscape of China in the 2000s is the emergence of government planned and sanctioned night-time consumption spaces, commonly known as bar-streets (*jiubajie*) in Chinese. These nightlife entertainment districts tend to occupy of some of most high profile, busy, or scenic spots of the city, making them highly visible to local citizens and tourists alike. They can potentially benefit Chinese cities greatly in the long run, either directly through stimulation of local economy and local tax revenue, or indirectly through attracting foreign and domestic tourists, conferences meetings, and corporate branches to the city. But they can also cause numerous problems — such as noise and violence— for local residents, as found in studies on the case of the UK. How and why did nightlife entertainment districts emerge so widely and rapidly across China? What role does the government and urban planners play in their emergence? Why does central and local governments support them even though officials barely tolerated nightlife activities in the past two decades? How are these districts being managed? Given that nightlife industries are until the present rather underdeveloped in China and that the government does not have much prior experience in it, are there serious problems of governance? What are their urban social impacts? These questions are becoming more and more urgent as cities and city districts across China scramble to construct bar-streets as a means to urban renewal. This study will explore such questions through examining one of the earliest government constructed bar-streets — the Baietan Bar-street in Fangcun, Guangzhou.



## Formulating Foreign Enclave in Shanghai: State Action in Globalization

Jun WANG

Department of Architecture, University of Hong Kong  
Pokfulam Road, Hong Kong  
Tel: +852 6121 4132  
Fax: +852 2241 5973  
Email: [jwang@arch.hku.hk](mailto:jwang@arch.hku.hk)

### Abstract

The industry of real estate has been serving as one of pillar industry sectors in the speedy urbanizing Chinese cities. The development of properties occurs in the contact of a global reorganization of industry and labor. Globalization of housing stocks is one of the key dimensions bearing witness to such interaction. Its burgeoning, formulation and the latter development, all will be shaped due to the broader social, economic, and cultural context, respective interests of actors and their varying power and control in the spectrum of geographic scales.

In Chinese cities, the burgeoning literature suggests an active role of local forces in many disciplines. One of the primary places bearing such interaction is foreign enclave, the emerging residence for foreigners (including ethnic foreigners and ethnic Chinese from overseas) in many large Chinese cities. However, a systematic examination of the local authorities' role in the formulation of foreign enclaves is less touched upon. This article is situated in such a concern that how the local authorities conceive the benefit behind the development of foreign enclaves and then how they design and implement corresponding strategies. Using the case of Gubei New District, the first and largest cluster of foreign housing projects in Shanghai, the article argues that, developing foreign enclaves is central to the local governments' pursuit of economic efficiency. An examination of this process may help to shed some light on the local authorities' dynamic activities behind the globalization of housing market in Chinese cities, with shifting strategies corresponding to the varying interests perceived.

**Keywords:** Globalization, foreign enclave, local authority, intruding elite group, Shanghai

### 1. Introduction

In Shanghai, a saying has penetrated street lingo: "residents of the areas within the inner circle speak English...while those residing outside the outer circle speak the Shanghai dialect" (Zhou & Liu, 2006, p. 23). Although a bit exaggerated and inaccurate, the saying depicts an emergence of spatial residential segregation; particularly, formulation of foreign enclaves that are usually luxury gated estates located at privileged places. Among the first foreign enclaves in Shanghai was the Gubei New District, which has remained as the largest cluster of foreign enclaves until today. On the one side, the development builds up the image of Gubei as the superior residence at the municipal level and exerts a profound impact on the urban land status structure, in terms of both market value and cognitive value in ordinary

people's eyes. It is an advancement that brings more and more investments on foreign housing projects, firstly to the Gubei New District, and to its immediate neighbor and then on to new neighbors, pushing up the land status of inner city areas. On the other side, the continuous inner city redevelopment projects collectively leads to replacement of residents after deconstruction and reconstruction. Original residents, usually working class, are removed out site by site. Moving in are the emerging affluent class, a sizable of whom are inflowing foreign professionals, managers and business owners in the opening up Chinese cities. It is discernible that global reorganization of production and labor has seen its reflection in the reforming of urban spaces in Shanghai. Meanwhile, examinations on various actors involved in the reformulation of urban spaces in a globalization context are far from conclusive.

Local interpretations of globalization are found to be “non-uniform” and “historicaldependent” (Olds, 1997, p. 110), due to the frictional interaction of various actors. The traditional global-to-local influence is criticized, as “all activities are local and that global only come into being through the integration of numerous locally based actors and forces”(Beauregard, 1995, p. 242). The frictional interactions of the divergent actors differ, to a large extent, due to intricate situations such as the broader social, economic, and cultural context, respective interests of actors and their varying power and control in the spectrum of geographic scales (Beauregard, 1995; Olds, 2001). Different from the US market-centered system, studies on Asian cities identify distinctive features on salient dimensions. Intervention of the state is reported in many Asian cities like Tokyo and Seoul, suggesting a state-centered bureaucratic system (Hill & Kim, 2000). The endeavour by the state is reasonable in the given urban context of the newly industries East, where the interwoven of globalization and urbanization brings about more pressure in the pierce global competition and urges the decision that that a top priority is given to economic development and competitiveness (Douglass, 2000). The pursuit for economic development by Chinese cities can not be more imperative. The global reorganization of production and labor brings about the opportunity of reallocation of capital and skilled labor, both of which are regarded of value to the economic growth. Competitiveness in attracting incoming capital and skilled labor is thus essential for regional developmental states with their own interests. Power decentralization from the central government to municipal and district government gives room for competitions between localities who act as regional developmental state for its own interest, as well as room for divergent regional actions to enhance the regional structural competitiveness (Zhu, 2004).

Regarding urban governance in advanced capitalist regions, Jessop introduces the concept of *entrepreneurial city*, exploring the government's role in the globalization process. The notion of *glurbanization* is introduced to refer to a local, regional or national state's strategies to build global advantage by restructuring urban space to enhance their international competitiveness (Jessop, April 2004; Jessop & Sum, 2000). The emergence of entrepreneurial city in Asian cities has been analyzed recently (Jessop & Sum, 2000; Wu, 2003). In China, organized endeavor by the state is firstly reported in major cities and eye-catching mega projects like Special Developing Zones. The interplay of the state and the market becomes one major issue. The examination of Shanghai's overall economic and spatial structure suggests that the role of the state is not really weakened, instead, it plays a key role of the state in determining the pace of spatial configuration (Han, 2000). A chronological analysis of Shanghai's metaphorical role with reference to the fate of the nation was conducted

by Wu (2003), applying the thesis of entrepreneurial city. The conclusion is made that the power of the state of China has never declined but been rescaled in favor of the local units; through the “rescaling of new state functionality” (p1695), the entrepreneurial city of Shanghai is carried out as a state project. “Inferior and suboptimal” (Zhu, 2004, p. 425) urban spaces like urban villages at Shantou and Luohu district at Shenzhen is found to be a result because of the gap between the central plan and the market mechanism and the lack of efficacy of China’s local developmental state in the yet-to-be-mature market system. In the transition towards market system, strategic practice of the local state appears to be crucial.

Formulation of foreign enclaves is one place witnessing such actions and the possibly resultant impact on the local society. The attention on the role of the state in the making of foreign enclaves is less touched upon. This paper is under such a concern that how local authorities act at the initial stage of foreign enclave development, how they conceive of the meaning behind the development of foreign enclaves and then how they design and implement corresponding strategies, using the case of Gubei New District in Shanghai. After an examination of the pulling in of elite group, detailed investigation of the Gubei case is addressed, this is followed by the discussion on the link between the two phenomena.

## **2. Background: Globalizing Shanghai and the Pulling In of Elite Group**

For Shanghai and many other Chinese cities, economic efficiency is an item given a high priority (Olds, 1997), while the process of globalization is taken as an opportunity, from which external forces and actors from advanced countries and regions are exploited to boost economic growth and further more, to accelerate industrial restructuring. The firstly recognized influx of external forces is capital, i.e., Foreign Direct Investments (FDI). Following the first group of Special Economic Zones like Shenzhen, the Shanghai case again confirms the strong association between the growth of Gross Domestic Product (GDP) and the sum of FDI (Yusuf & Wu, 1997). The Shanghai government expects more. In Chinese official documents and publications, the term of global city usually hints a top-ranked status in the world city hierarchy; the identity of a global city, for many Chinese city governments and local chief officials, means another solid evidence to claim the achievement and demonstrate their performance. The term of global city appears in many cities’ slogans and is announced as the vision of the city. To gain the status of a global city which refers to the location of the entity that commends, controls and influences the world economy - usually a service society (Sassen, 1991), industrial restructuring is a necessary step. Again, influx of external forces and actors from advanced capitalist countries is one primary means.

From 1987 to 2005, besides the steady increase of actually utilized foreign investment from USD 215 million of to USD 6,850 million, another noteworthy feature is the shifting in proportional distribution of FDI into various industry sectors. Greater share goes to the service industry. From 1999 to 2005, the proportion of FDI going to the secondary industry dropped from 58% to 32%; in contrast, the proportion of FDI invested in tertiary industry increased from 42% to 68%. The restructuring of FDI is accompanied with a similar trend in the proportional structure of foreign invested companies, namely, joint-ventures, co-operated projects, and wholly foreign-owned enterprises. In the past years, the number of foreign-invested enterprises rose from 4,716 in 2000 to 5,582 in 2005. The more impressive figures come from the indicator

denoting the number of those on the Fortune 500 list, which rose from 150 in 2000 to 260 in 2005, and especially the number of regional headquarters of MNCs, which leapt from 20 to 115 during the same period (Table 1).

Table 1: FDI and the number of foreign-invested enterprises: 1985 ~ 2005

	1985	1990	1995	2000	2001	2002	2003	2004	2005
FDI	0.62	1.77	39.42	31.6	43.91	50.3	58.5	65.41	68.5
Enterprises	-	-	-	4716	4994	5382	5758	4797	5582
Headquarters	-	-	-	20	25	50	80	90	115
Fortune 500	-	-	-	150	160	170	185	215	260

FDI, unit: 100 million US\$

Source : Savills China, 2007; ShaMSB, 2000; 2004; 2006

For the second objective, influx of professional and managerial labors in service industry is very much stressed. The pouring in of FDI and the mushrooming of foreign-invested companies have contributed to a promising job market, especially in the tertiary industry. From the years 2001 to 2003, Shanghai experienced a secular need for professional and managerial labors in service industry, with 62,500 vacancies in the financial industry, 201,000 vacancies in real estate, and 354,400 positions in retail, wholesale, accommodation, and catering services (ShaMSB, , 2004). However, the speedy urbanization process and the simultaneous economic restructuring hardly gives time for the natural transformation of the local labor structure (Cai & Shen, 2002). Instead, a sizable amount of vacancies, particularly those at the upper end of the employment structure, are usually filled in by oversea human resources, in terms of foreign expatriates and locally hired overseas labors through the talent immigration schemes, for the knowledge and experience they bear.

The first wave of the elite group started to expand when foreign-invested enterprises were encouraged in Shanghai in the early 80s. Parallel with the increasing number of foreigner invested enterprises, it was natural to predict a growing number of foreign expatriates. The pioneer group in Shanghai was made up of business owners who came to run their businesses and senior managers or chief representatives of multinational companies, which set up their branches in Shanghai. This wave was sustained as more and more new foreign-invested enterprises came, as well as when existing foreigninvested enterprises expanded.

The wave of borrowing qualified workers from overseas is advocated and pushed forward by the local authorities. The second wave is mainly constituted by managerial and professional workers coming to Shanghai through the talent immigration schemes. In the year 1989, Article No. 88 was announced to encourage Chinese students who were studying abroad to return to Shanghai to work. Three years later, a revised version was published, claiming preferential policies given to oversea talents, their family members, as well as to employers who hire them (Shanghai Portal, 2007). In 1994, the then mayor Huang Ju announced the plan of “Building the Talents Highland of Shanghai”, and the slogan was changed to “The Highland of International Talents”, particularly “a confluence region for the excellent talents in the West coast of the Pacific Ocean” in 2001 (Cai & Shen, 2002, p. 12). In 2002, Article No. 122 was published, according to which, the focus group was extended to cover human resources from other domestic regions, but explicitly defined to be talents with

bachelor's degree and above, or specialists (Shanghai Portal, 2007). Besides the inward capital, the municipal government values equally, if not more, the incoming managerial and professional workers who are desperately needed but relatively hard to find from the local population in the then Shanghai (Cai & Shen, 2002).

Table 2: Number of residents from overseas countries and regions

	2000		2003		2004		2005	
Total	60 020	100%	72 895	100%	90 409	100%	100 011	100%
Pacific Region	40 713	67.8%	47 584	65.3%	57 210	63.3%	54 615	54.6%
Hong Kong	4 121	6.9%	3 505	4.8%	3 505	3.9%	-	-
Taiwan	10 522	17.5%	11 818	16.2%	11 818	13.1%	-	-
Japan	12 270	20.4%	17 409	23.9%	22 563	25.0%	27 812	27.8%
Korea	3 294	5.5%	7 135	9.8%	9 441	10.4%	14 047	14.0%
Malaysia	1 278	2.1%	1 955	2.7%	2 520	2.8%	3 480	3.5%
Singapore	2 808	4.7%	3 263	4.5%	4 472	4.9%	5 547	5.5%
Australia	6 420	10.7%	2 499	3.4%	2 891	3.2%	3 729	3.7%
North America & Europe	11 583	19.3%	14 768	20.3%	22 648	25.1%	30 284	30.3%
USA	6 354	10.6%	8 248	11.3%	10 695	11.8%	14 329	14.3%
Canada	1 361	2.3%	2 352	3.2%	3 189	3.5%	4 279	4.3%
Germany	1 511	2.5%	2 541	3.5%	3 496	3.9%	4 591	4.6%
UK	2 357	3.9%	1 627	2.2%	2 135	2.4%	2 904	2.9%
France	-	-	-	-	3 133	3.5%	4 181	4.2%
Others	7724	12.9%	10543	14.5%	10551	11.7%	15112	15.1%

Source: ShaMSB, 2006b

As a result, we see a speedy expansion of inflowing professional, managerial labors as well as business owners. In the year 2000, there were 60,020 foreign dwellers<sup>39</sup> in Shanghai; the figure went up to 72,895 in 2003, and then kept rising to 90,409 and 100,011 in 2004 and 2005, respectively (ShaMSB, 2006b). More than half of them come from the Pacific region, while the population from Europe and North America are also increasing. According to the data, at the end of 2005, the three largest subgroups were the Japanese, Koreans, and Americans. Although we can not get the figure of Hong Kongers and Taiwanese in the year 2005 from the official data, the number is speculated to be huge from the figures in the previous years. According to the data cited by Sang, the total number of Taiwanese dwelling in Shanghai has reached 300,000 in the year 2002 and they constitute the largest proportion of intruding elite group. The talent immigration schemes also brought about 10,670,000 non-local workers who settled in Shanghai, about 60,000 were returning overseas Chinese students who came to Shanghai for career development.

Compared with the number of local population, the sum of this inflowing population is not huge. However, they are either wealthy in the cultural or economic term or, for

<sup>39</sup> From 2000 to 2004, the term of foreign dwellers in the government statistic yearbook refers to ethnic foreigners and ethnic Chinese from Hong Kong, Macau, and Taiwan, while the later is excluded from the social group in the year 2005.

the majority, both. Among ethnic foreigners, employees of foreign-invested companies and their family members made up the largest share, accounting for 60.1%; 9.8% are officials of overseas missions and their family members and another 4.6% are experts or specialists (for particular projects) and their families (ShaMSB,, 2006b). A better economic status seems to be obvious with reference to the first generation of the inflowing professionals, which are constituted by investors and CEOs of MNCs. Aside from salaries equivalent to the level of their origins, expatriates in multinational companies also enjoy rich housing allowances. Normally, the housing allowance for CEOs in MNCs will be around US\$5000 and US\$500 for ordinary staffs (interview of staff at Jones Lang LaSalle, 2003; similar report can be found in Wu, 2006). Besides that, their wealth in cultural capital and high position in the occupational structure hints a well-paid wage. The data collected by the Office of Foreign Affairs before June 2001 further revealed that, 89.27% of foreigners have a bachelor's degree or above, 73.3% have a middle to senior managerial position, with 6.6% being chief representatives for multi-national companies (Sang, 2002). Survey data indicates that about 82% of Taiwanese have a tertiary degree or above, 46% of them are senior managers, 16% are chief representatives, and another 26% are business owners. With regards to immigrants through talent schemes, 73.3% have a bachelor's degree and another 8.2% with a master's degree or above (ShaMSB, 2006a). The percentage of bachelor's degree holders among returned Chinese students rose to 100%, with those having master and doctorate degrees reaching 80%. The official data also revealed many renowned academic scholars' joining the settlers, including 73 academicians and 11 national chief scientists; about 3,200 registered firms and companies were set up by these returned overseas Chinese (Cai & Shen, 2002). Compared with the local population, about 11.4% of who have a tertiary degree (ShaMSB,, 2001), the inflowing group stands out with their high educational attainment level, high position in the employment structure, high economic status, and nationality. The huge disparity between the inflowing group and the local population makes the former an elite class, for whom, the foreign enclaves are developed.

### **3. Forming Foreign Enclaves: The Case of Gubei**

The origin of the foreigners' settlement is traced back to the housing demand by the influx of foreign expatriates who were coming when the door was opened to foreign companies in the early 80s. The influx of foreign expatriates hardly found place to live since their accommodation can not be solved by the then social-welfare housing system (Wu & Webber, 2004). Meanwhile, real commodity housing stocks in housing market is not available until 1992, when newly established developing companies gradually took over the responsibility of housing construction. In this burgeoning housing market, further limitation was made to alternative options for foreign consumers, who can only select from Housing for sale to foreigners (*Waixiaofang*) that was requested to follow special application procedure after the payment of Land Use Right. In this sense, hotel or services apartment are the main way for foreign expatriates to get accommodation when the Hongqiao Economic and Technique developing Zone (ETDZ) is opened for incoming investment in the early 80s. To remove possible barrier in attracting incoming investment, residences for foreigners were planned. In 1984, the Municipal Government approved the proposal of "building Gubei New District" submitted by the District Government of Changning, as a subsequent step following the proposal of "Developing Hongqiao ETDZ". The local authorities defined the development to be high standard 'export-oriented' residential stocks (Jiang, et al, 1999). In correspondence with many schemes related to

globalization such as Highland of International Talent, the project was also entitled to be ‘International Community’ (*Guoji Shequ*). It is explicitly addressed that the rationale of developing Gubei New District is to offer residential properties for foreign expatriates who work in the Hongqiao ETDZ. The land adjacent to Hongqiao ETDZ was designated as the site, on which relevant facilities for daily life needs were also planned. Although being a commercial development, the idea of Gubei New District and its design may also reflect some influence from the work compound concept in the socialist system. Residential community with facilities to support daily life is planned adjacent to their work place.

According to the plan, the Gubei residential district will cover a total land area of 136 acres, encompassed by Yaohong road, Hongxu road, Guyang road (Xuhong rail line), and Hongqiao road. After the implementation of the development, the Gubei district, which will be developed through two phases, will offer about 3,000,000 square meters of building spaces for residential use and projects of consulate buildings (Jiang, et al, 1999). In several years, a twenty-block area of former agriculture land, low-quality workers’ village, and work unit compounds, soon became a luxury neighborhood, its first phase having been developed to be the first large patch of international settlement (China Enterprise, 2006). The Gubei New District gained the nickname of “The small United Nations” which accommodates citizens from about 30 countries and regions (Lu, et al., , 1999).

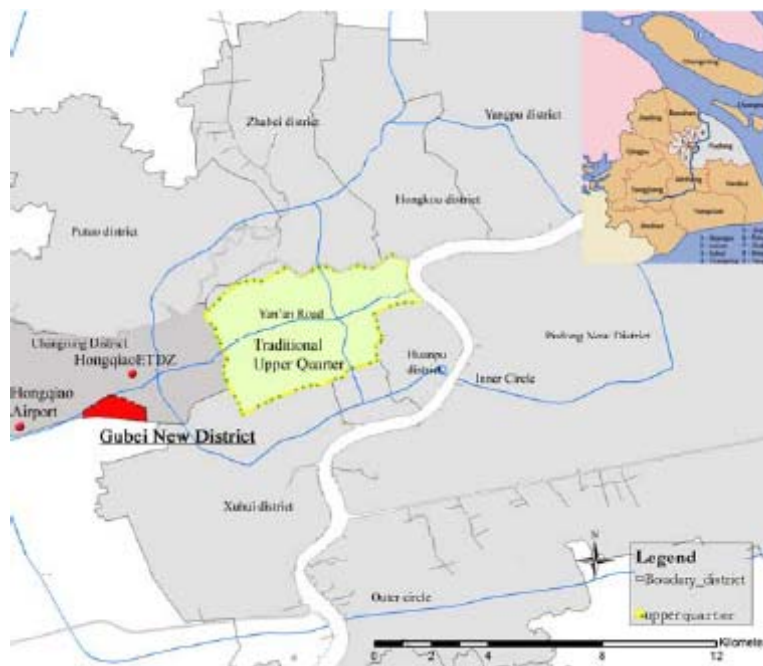


Figure 1: The Gubei New District in Shanghai

### 3.1 Organization of the Gubei United Development Company

A Gubei New District United Steering Committee - later changed to Gubei United Development Company - was constituted jointly by several stated-owned or statecontrolled institutions and firms, namely, the China Enterprises under the Municipal Housing, Land and Resource Administration Bureau, the New Changning Ltd. under the Changning District Construction Department, and Pujiang Construction and Development Company under the Shanghai Architectural Design and Research Institution (Figure 2). The composition is a cross-department coordination as well as

coordination by authorities at differential spatial scales. This kind of “joint-venture” brings together the several core arms of the government that relate to urban redevelopment, therefore, facilitating the procedure which used to require thousands of stamps at different departments. Meanwhile, the company is also a joint-venture between the municipal-level government department and the district-level one, which ensures a priority in the access to urban resources at either level.

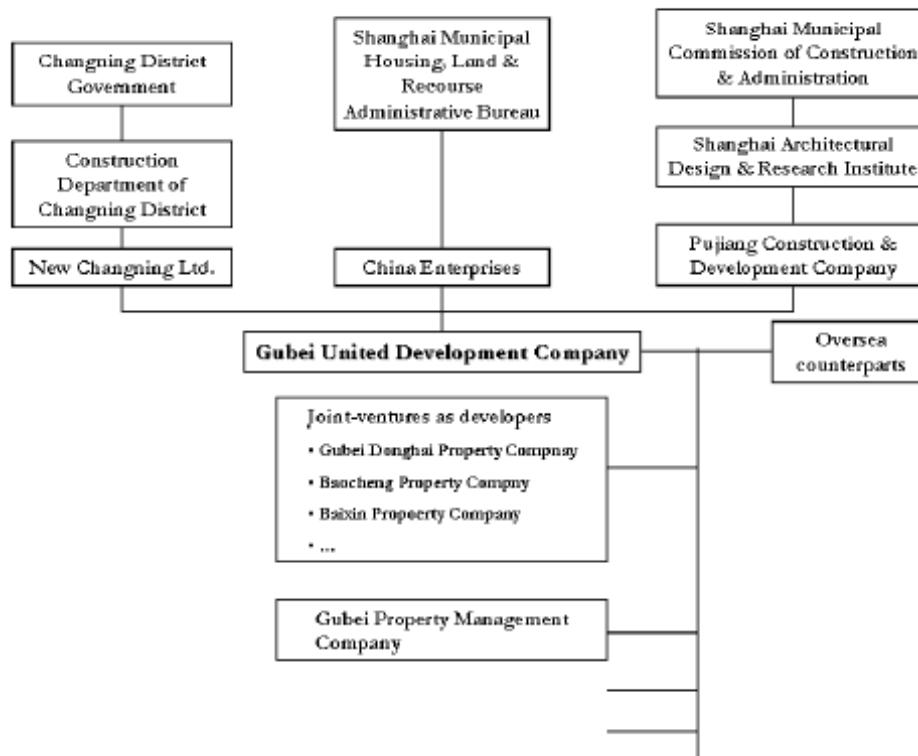


Figure 2: Structural relationships between Gubei United Development Company and the Shanghai Municipal Government

Authorized by the municipal government, the Gubei United Development Company is in charge of almost everything involved in the development of the Gubei New District, starting from developing agendas and schedules to long-term maintenance for the district (China Enterprise, 2006). The company took up a variety of roles, in a very concise sense, can be described as one particular authority whose control covers a variety of disciplines at different levels: serving as resources and land allocation institution to relocate original residents and farmers on agriculture land, leasing land parcels within the district to different developers; serving as planning department to develop master plan for the district, to plan and construct supporting infrastructures and utilities, as well as to decide the primary style for all buildings. Meanwhile, it also acts as developers to invest on residential stocks independently or through joint ventures with overseas developers, particularly those from Hong Kong; property management and marketing is also its duty.

Development of high end residential estates was unprecedented for local institutions, since any items related to consumption might cause the concerns of bourgeois poison and were strictly banned in the socialist reform. The Gubei Development Company itself lacked the capability and confidence to plan a westernized high end estate



compatible with the international standards, nor to say the huge amount of capital needed for the investment. External forces were welcomed and cooperation occurred in almost every chain throughout the whole procedure. Being the one and only channel for cooperation with other parties, the company proactively invites participation of external experienced enterprises in the building of Gubei New District. During the stage of master planning, a French-Chinese architect, Fusheng Huang, was invited as the principal architect to work with the Shanghai Architectural Design and Research Institution. For the development of estates, joint venture is the main form of actors to develop estates site by site. In fact, many estates in Gubei New District are developed by Shanghai-Hong Kong joint property development companies. For example, the Gubei Donghai Property Company, the Baocheng Property Company, and the Baixin Property Company are all joint ventures by the Gubei United Company with respective Hong Kong developers. Property management is another place where the local institutions utilized the knowledge and experiences of their foreign counterparts through joint ventures. In the year 1991, the Gubei Property Management Company, the first joint-venture company of property management in Shanghai, was established through the cooperation of the Gubei United Company and the Hong Kong Mandarin Property Management Ltd. Company (China Enterprise, 2006; Lu et al., 1999). All estates within the Gubei district are then managed by this joint venture. It is through the form of joint-venture that the Gubei Company facilitates the connectedness of divergent actors from a wide range of disciplines. At the same time, it is also through the form of joint-venture that the company ensures the authorities' intervention at various aspects and at divergent levels.

## **3.2 Preparation and planning of Gubei New District**

### *3.2.1 Place with location advantages*

The effort from the local authorities can be traced back to the very beginning when the land of Gubei was designated to be the place for international settlement. As explicitly stated in government documents (Jiang, et al, 1999), one of the imperative factors leading to its later success is its locational advantages. The site of Gubei New District is located in the Changning district, on the path linking the Hongqiao International Airport to the city core. To its east and south-east is the traditional Upper Quarter; to its north is the Hongqiao ETDZ where the first large developing zone in Shanghai is located; to its west is the Hongqiao International Airport, the former main entrance to Shanghai; and the land itself as well as those to its south-west were relatively less developed and occupied by several worker's villages and agriculture fields. Geographically, the high accessibility to the city center and the international airport make it a desirable option to the internationally floating population, most of whom are business owners and chief managers who tend to do a lot of traveling. Cognitively, another positive influence exerted by the neighboring areas is associated with decent reputation.

Gubei New District sits on a relatively marginal land adjacent to the then superior residence area. During the colonial period, the Changning district was among the last patches of development along the expansion of foreign concessions toward the west. This district, benefited from the proximity to the Upper Quarter and its relative natural environment, soon became the ideal land for luxury villas for consulates, foreign

senior managers, as well as Chinese bureaucrats and entrepreneurs<sup>40</sup> (Jiang, et al, 1999). To the east of Gubei, one will find the superior residence area as the traditional Upper Quarter known since the colonial period. The housing expropriation and reallocation in the socialist era, however, did not weaken the superior status of the Upper Quarter; in fact it was even enhanced. After reallocation of housing, this area merely turned into communities of cadres and intellectuals<sup>41</sup>. Although Gubei was still relatively less developed at that time, the land had great potential. The contextual setting where the Gubei New District is located prepares the ground for the formulation of an affluent household community. When the government designated this land as a settlement for foreigners, they created an access to lands with both functional advantage and decent reputation for the inflowing elite group.

*3.2.2 Designing Residence for Foreigners* Aside from the carefully selected location, many other deliberately designed strategies have been employed. The focus on foreign elites – a group distinguished by their cultural and economic background – leads to a series of postulation on what kind of housing and living environments they prefer and how to bridge the demand and the supply gap. The first decision was to adopt western, or to be more accurate, European cultural features as the primary architectural style for the Gubei project.

The resorting to foreign models may rest on three reasons. During the years under socialist reform, “any form of enrichment” (Giroir, 2006, p. 217) was discredited and all housing constructions were under the principle of ‘building more with less money’ (*duo kuai hao sheng*) (Editorial Board of Shanghai Housing, 1993). Modern Architecture that used to be the prevailing style in Chinese cities has evolved to an extreme of simplicity and a reflection of the austere economy, far from the needs of a luxury development. Meanwhile, the concession to the past in Shanghai, in a sense, has exerted a profound influence on the local culture and regional value system. The grand western style buildings of the colonial era serve as reminders, keeping a vivid collective memory of the magnificence and splendor Shanghai reached. Moreover, it is more or less intuitive that western style buildings are supposed to more probably give foreigners (who are also expected to be from advanced regions like North America and Europe) a familiar feeling and make them willing to settle down in Shanghai. Thus, relevant institutions worked out the central theme of ‘European Style (on) the hospitable Eastern Land’ (*dongfang retu, oulu fengqing*) for the Gubei project (Jiang, 1999), intending to build the image of a luxurious and comfortable (hometown-like for foreigners) neighborhood.

The final decision, that the master plan and landscape design should follow a ‘Palace Style’ (*gongtingshi*) and a ‘Continental European Classic Style’ (*oulu fengge*) for all individual buildings to be constructed within the territory became the general guideline for all developers. The master plan of the Gubei New District and landscape design is obviously inspired by, or mimics, that of the Versailles Palace in Paris as

---

<sup>40</sup> According to the statistical data, there are 931 detached or attached houses constructed before 1949 in this district, accounting for 29% of the whole floor spaces of houses in Shanghai. Particularly, the number of luxury villas, many with stables, was about 303 including several renowned houses like the Sassoon Villa and the Yao house.

<sup>41</sup> One telling example is the Jiangsu Road Sub-district which was known as a community of foreign elites before 1950 and then turned into a community of Chinese entrepreneurs, renowned elites, and relatives of overseas Chinese (Jiang, et al, 1999).

again indicated by the words of ‘palace style’. Geometric design is very much emphasized in the set up of a formal symmetric layout; elements like fountains, avenues, and vistas were employed to claim the magnificence of a royal court. The so-called European Classic Style may be nothing more than an imagination based on a collection of architecture elements, “seen through the eyes of property developers” (Giroir, 2006, p. 216). Classical elements were frequently used arbitrarily, illogically, and capriciously. Clients began to select from catalogs of historical precedents, and architects were merely employed to provide a façade to an otherwise workable scheme. The developers further exploited this westernization by emphasizing it through all kinds of means, for example, in the naming of estates. In the Gubei New District, one can commonly find many references to European cities or places in the name of estates, such as the ‘Victory Building’, ‘Vienna Plaza’, ‘Paris Garden’, and so on. Such intention is more obvious in the advertisements, many of which claimed that the given estates would “bring back the memory of previous living experiences in relevant European cities or places”. With all the efforts, the course of architecture and landscape were bound to foster an image of dignitary, European-citysimulated community for its foreign inhabitants.



Figure 3: Westernized style for the Gubei New District

Besides adopting the westernized style for the physical settings, the aim to build up a westernized neighborhood is also repeatedly enhanced by other means. One of these means specially designed to attract foreigners is English speaking services. Local authorities believe that the quality of education available for children is one of the significant factors which determine the coming and staying of foreigners. This is particularly true when the whole families rather than the expatriates alone are expected to settle down in the city. In Chinese cities, the planning and management of communal facilities follows a set of codes according to the population to be served, directed by respective institutions. For the proposal international community of Gubei New District, the kindergarten and school within the territory are planned to be international ones, where native English-speaking teachers are hired (Jiang, et al, 1999). This then makes the Gubei district more attractive for those concerned with the education of their children. English speaking is also required for staffs in the administrative office at the sub-district level, that is, street office (*Jiedao*). A new street office, namely, the Ronghua street office, was set up especially to deal with daily affairs of this district. In the Ronghua street office, basic training programs for staffs cover general knowledge of a variety of nations, from national flags to local customs, aside from simple conversations in English (ShCCPHRO, 1998). These initiatives are very useful for foreigners, making their daily lives in Shanghai where few people understand or communicate in English easier.

Last but not least, the other strategic step in the implementation of the proposal of building an international settlement is marketing. In 1992, the Gubei United Company set up the Gubei New District Marketing Center to be responsible for the merchandising of all properties developed by the Gubei United Company and its branches. As soon as it was set up, the center started its attempt to establish sales branches in other countries and regions, with the purpose of putting properties in Gubei to the global housing market. At the end of the same year, sales branches opened in countries and regions like Singapore, USA, Canada, and Hong Kong, with the office at Hong Kong expanding into a marketing company in 1993. Furthermore, the center also looked for varying types of corporations with overseas actors in the field of real estate. Promotional packages were offered to overseas real estate agents and joint ventures with overseas property developers were set up, all with the intention to take advantage of the source of worldwide consumers (China Enterprise, 2006).

### *3.2.3 Designing Residence for affluent class*

If all the strategies discussed above are designed based on the ethnic feature of the inflowing population, there are other strategies to focus on their socio-economic characteristics, that is, better off economic status. The proposed luxury living environment is deliberately planned from both macro and micro levels, collectively portrayed by elements that imply a more deliberate consideration and higher investment. These include westernized ornaments added to the facade, expensive materials for the outside and inside, green space and amenities, as well as spaces for private car ownership. At almost every aspect, the design standard adopted by estates in Gubei far surpasses that of the ordinary domestic housing developments during the same period. At the neighborhood level, private car parking space was planned at a one-to-one ratio in Gubei district, while in ordinary neighborhoods developed after 1997 in Shanghai one car park space would be shared by 4 or even 10 households<sup>42</sup>. Private clubs for residents began to appear in these high end residential estates, affording a variety of luxury amenities like swimming pools, gymnasiums, and recreational rooms; while most ordinary neighborhoods merely had poorly maintained open spaces, just to meet the requirement of greenery ratio rather than for the amenity of its inhabitants. For housing units in the ordinary residential developments, only the necessary structural parts without finish and basic equipments for kitchen and toilets would be available; while housing units in this district were among the pioneering groups that were luxuriously decorated with attention to lavish details and fully equipped with big name brand utilities and electrical appliances. Particularly, it was in the Gubei district where many advanced electronic appliances first came into use, like the video-telephone and auto-alarm system. The feature of luxury living environment has become a more imperative factor to distinguish foreign enclaves from the ordinary ones.

---

<sup>42</sup> According to the Code for Transportation Design and Parking Space that took effect in 1997, housing units will be divided into five categories, according to which different standards for car parking space planning should be employed. For the first level, which refers to villas or apartments larger than 150 sq. meters in size, the ratio of number of housing unit and number of car parking space is 1:1. The ratio will be 2:1 for the second level, referring to units with size 120-150 sq. meters; 4:1 for the third level referring to units with size 100-120 sq. meters; 10:1 for the fourth level referring to units with size 80-100 sq. meters; and 20:1 for the fifth level referring to units smaller than 80 sq. meters.

Different from the typical gradual and experimental pace of market transition in China, replacement of residents for the site is more like a big-bang action. Before land parcels are leased to developers, original residents and farmers on the site of Gubei have been relocated to remote suburban areas. After the development of new residential estates, market mechanism becomes the platform to filter the local ordinary folks out. In theory, *Waixiaofang* is also open to local people; it is the Capability of housing consumption in the housing market becomes the key element determining who will move in. According to the property consultant firms, the price of properties in Gubei ranged from 1,500 US\$/sq. meter to 2,000 US\$/sq. meter. It is to be noted that the development of the Gubei district started from the early 90s when the city was yet to see economic growth as well as an increase in the individual income level. The average income level of local people was too low to afford property in Gubei. Based on the prices given above, a 100 sq. meters flat in Gubei would require 55 years of income for a three-person household within the average income level, or 29 years of income for the upper class households, given the domestic income levels in 1995<sup>43</sup>. The access to urban housing for ordinary local people is vulnerable.

Being a commercial project, the construction of Gubei New District seems successful. The acceptances of Gubei New District as their residence by the inflowing foreigners, at the beginning, may be kind of have-to action. The burgeoning housing market can hardly offer many options to foreign consumers at that time. Along with the development of Gubei, where the image of superior residence being established, the wide discrepancy between Gubei and ordinary estates, both in terms of tangible and intangible quality, may be the reason make them stay. After the lifting of policy on “*Waixiaofang*”, that is, foreigner can buy any housing stocks in the market, spatial segregation of residential choices does emerge, but to a very limited degree. For instance, many western people move to Pudong for a relatively suburban setting, and Asian people usually stay for a city living preference.

#### **4. Final Reflection**

The Gubei New District is regarded as a city-level project that will contribute to the image of the city as a livable city with an international standard and more important, to build an international basis of talents. The ultimate goal is to make the place of Shanghai more structural competitive in the global reorganization of production and push up the position of Shanghai in the global city hierarchy, towards a global center of trade, finance and business. As a residential area for foreign professional labors, the plan of Gubei New district is one step in the comprehensive plan.

Given the fierce competition in industrial restructuring, the influx of capital, people, and knowledge, particularly those from advanced countries and regions, is found to be of value to bolster the local economy. Following this logic, local authorities regard their interests as identical or mutually beneficial with those of foreign actors. They aggressively pursue and invite the intrusion of the latter. From the many preferential policies legitimized for Talent Highland building to the deliberately designed International Community, the governments show a consistent interest in pulling in this social group through many schemes. The construction of foreign enclaves such as the Gubei new District is then used as one of the means to attract the inward flow of the

---

<sup>43</sup> According to the statistical data, the average disposable yearly income per person was 7,171 Chinese Yuan, and that for the upper class was 13,795 Chinese Yuan (ShaMSB, 2000). Here, 1 US dollars is converted to 8 Chinese Yuan.

elite group; being one imperative component in the overall strategic plan to build an “international standard Shanghai”; eventually central to the governments’ ultimate goal of an effective and efficient economic growth. The primary purpose of developing Gubei was to serve the foreigners, and thus the imperative feature of the international community is a postulation of what foreigners demand. Land with privileges is designated; westernized style is specified to be the primary style for the master plan and individual building design to forge a hometown-like environment and embody the concept of “hospitable eastern land”; Export-oriented marketing design is another step to reach out directly to overseas consumers. As a result, the local actor proactively postulating the demand of foreigners and aided by more experienced foreign practitioners designs, constructs, and promotes these foreign enclaves to them.

The interests brought by the foreign enclaves building later on go beyond a place to attract and root a specific group needed for the economic growth, rather, it bolsters and pushes forward the industry of real estate. The Gubei New District is also regarded as an experimental field for marketization. The knowledge of overseas counterparts who have rich experiences in dealing with international consumers are borrowed and exploited through cooperation. This piece of land is converted to a cluster of high end residential stocks in the housing market, generating huge revenues to the local government. The Gubei project shows an example of initiating and managing the industry sector of real estate. A shift emerges in the meaning of foreign enclaves to the local authorities, so does the strategies employed in developing the following phase. The discovery of higher profit returns from the real estate industry places emphasis on the affluent economic status of this group. How to forge a living environment for the affluent class becomes the greater concern of the local authorities. Meanwhile, the European Classic Style employed to appeal to the taste of the foreigners is now beginning to see challenges from alternative styles.

The implementation of the plan will not be possible if not for the support from the municipal government. The Gubei New District is carried out as a city-level project, with the structural relationship between the Gubei United Development Company and the municipal government at a wide variety sectors and levels (Figure 2). The ability to access many key resources of the local authorities is also evident from many other aspects, be it tangible or intangible. For example, the geographic accessibility of Gubei was possible only after the construction of infrastructure at a broader context, the concentration of city-level high standard facilities and open spaces also contributed, both of which are subject to the comprehensive planning of the Municipal Planning Bureau. The English speaking service from the street office and the setting up of international kindergartens and schools need the support from the District and Sub-district Administrative Offices and the Education Bureau respectively, all of which are within the structure of administrative organizations. Lesson and experiences are summarized and advocated to other regions through the myriads of arms in the administrative organization. In 1995, the Gubei New District was elected as one of the Top Ten Urban Landscapes in Shanghai in the 90s. In 1999, it was adjudged the Best Residential District in Shanghai for the 50 years ceremony of the New China (Huang et al., 2005; Lu et al., 1999). The Gubei United Company was awarded the title “Top Twelve property developers in Shanghai” by the expert committee in 1994. Many senior officials, such as the former city head Jiang Zemin and Huang Ju, as well as the head of Construction Ministry Yu Zhengsheng came for

a visit, proclaiming it a model for other regions and district governments to follow (China Enterprise, 2006).

The intervention undergoes adaptation along with the simultaneous structural changes of the City of Shanghai itself, namely, a wider opening to external actors and a more complete marketization. Support to Gubei from the authorities continues, with more at the macro level. In 2003, a Hongyan greenery open space was planned to the north of the second phase of Gubei New District. The open space with a size of 220 000 square meters is one of the ten city-level projects of public open spaces planned by the Shanghai municipal government in line with its aim to compete for the title of National Park City (Anonymous, 2003). In 2006, Gubei New District became the first community in Shanghai where digit-TV was installed, one of the key step toward the pursuit of digit- Changing by the district government (China Enterprise, 2006). City-level mega projects, from open spaces, amenities, and infrastructure, are concentrated in this area which is already of high value. The repeated investments widen the already great contrast between Gubei and other lands marginalized, pushing the former further up the ladder of land status.

The local developmental state gives a top priority to economic efficiency, and identifies common interest with the inflowing professional labors for industrial restructuring as well as incoming developers for development of real estate and the transition towards market system. The identical interest produces reciprocal relationship between the local government and the incoming actors. The reciprocal relationship benefited two sides; however, ignore the interest of the ordinary public. Original residents were moved out to city fringe where land is relatively cheap; the huge disparity in economic terms between the inflowing elite group and the local population is one of the key factors enhancing the replacement inevitably in the market mechanism. The construction of high end estate and image of an international good life push up the land status of Gubei and in return, attract continuous investment by developers as well as by the local developmental state on infrastructures. The concentration of resources on inner city widens the contrast of urban land, prepare for the basis for further social spatial polarization.

## 5. References

- Anonymous. (2003, March 12). Building a Green Shanghai. *Shanghai Portal*.
- Beauregard, R. A. (1995). Theorizing the global-local connection. (In P. L. Knox & P. J. Taylor (Eds.), *World Cities in a World-System* (pp. 232-248). Cambridge: Cambridge University Press.)
- Cai, Z., & Shen, R. (Eds.). (2002). *The Way towards Talents Internationalization: A Strategic Research Report on Talents Development in Shanghai (Zouxiang Rencai Guojihua: Shanghai Rencai Fanzhan Yanjiu Baogao)*. (Shanghai: Shanghai Society Research Institution Press.)
- China Enterprise. (2006). A Panorama of Important Events.
- Douglass, M. (2000). Mega-urban regions and world city formation: globalisation, the economic crisis and urban policy issues in Pacific Asia. *Urban Studies*, 37, 2315-2335.
- Editorial Board of Shanghai Housing. (1993). *Shanghai Housing: 1949~1990 (Shanghai Zhuzhai: 1949~1990)*. (Shanghai: Shanghai Science Public Publishing House.)

- Giroir, G. (2006). A Globalized golden ghetto in a Chinese garden: the Fontainebleau Villas in Shanghai. (In F. Wu (Ed.), *Globalization and Chinese City* (Vol. 7, pp. 208- 226). London and New York: Routledge.)
- Han, S. S. (2000). Shanghai between state and market in urban transformation. *Urban Studies*, 37, 2091-2112.
- Hill, R. C., & Kim, J. W. (2000). Global cities and developmental states: New York, Tokyo and Seoul. *Urban Studies*, 37, 2167-2195.
- Huang, M., et al. (2005). *Documents on Shanghai (Shanghai tong zhi)* (1 ed.). (Shanghai: Shanghai People's Press, Shanghai Social Science Institution Press.)
- Jessop, B. (April 2004). *From localities via the spatial turn to spatio-temporal fixes: a strategicrelational odyssey*. Paper presented at the Conference Name|. Retrieved Access Date|. from URL|.
- Jessop, B., & Sum, N.-L. (2000). An entrepreneurial city in action: Hong Kong's emerging strategies in and for (inter) urban competition. *Urban Studies*, 37, 2287- 2313.
- Jiang, L., & Editor Board of the Changning qu zhi (Shanghai Shi ChangningQu zhi bianzuan weiyuanhui.). (1999). *Documents of Changning District, Shanghai (Changning Qu zhi)*. (Shanghai: Shanghai Social Science Institution Press.)
- Lu, W., et al. (1999). *Document for Shanghai Real Estate (shanghai fangdichan zhi)* (Vol. 10). (Shanghai: Shanghai Social Science Institution Press.)
- Olds, K. (1997). Globalizing Shanghai: the 'Global Intelligence Corps' and the building of Pudong. *Cities*, 14, 109-123.
- Olds, K. (2001). *Globalization and urban change : capital, culture, and Pacific Rim mega-projects*. (Oxford ; New York: Oxford University Press.)
- Sang, J. (2002). Strategic Consideration after the Mergence of Waixiaofang and Neixiaofang in Shanghai (Shanghai Waixiao Shangpinfang Binggui hou de Jingzhen Duice Sikao). *Shanghai Real Estate (Shanghai Fangdi)*, 8.
- Sassen, S. (1991). *The Global City: New York, London, Tokyo*. (Princeton NJ: Princeton University Press.)
- ShaMSB (Shanghai Municipal Statistic Bureau). (2001). *The 5th Population Census Report of Shanghai*. Shanghai: Shanghai Statistic Bureau.
- ShaMSB(Shanghai Municipal Statistics Bureau). (2004). *Shanghai statistic yearbook 2004 (Shanghai tongji nianjian 2004)*. (Shanghai: China Statistic Press.)
- ShaMSB(Shanghai Municipal Statistics Bureau). (2006a). *Report of Economic and Social Development in Shanghai in 2005*. (Shanghai.)
- ShaMSB(Shanghai Municipal Statistics Bureau). (2006b). *Shanghai Statistics Yearbook 2006 (Shanghai Tongji Nianjian 2006)*. (Shanghai: China Statistic Press.)
- Shanghai Portal. (2007). Online Archives: Policies about Human Resources [Electronic Version]. Retrieved Jan 25 2007 from <http://www.shanghai.gov.cn/shanghai/node2314/node3124/node3125/node3130/index.html>.
- ShCCPHRO (Shanghai Municipapl Committe CCP History Research Office), et al. (1998). *Twenty Years after Open-Door Policy in Shanghai (Shanghai Gaige Kaifang er shi nian) - Changning* (1 ed.). (Shanghai: Shanghai yuan dong chu ban she.)
- Wu, F. (2003). The (post-) socialist entrepreneurial city as a state project: Shanghai's reglobalisation in question. *Urban Studies*, 40, 1673-1698.



- Wu, F. (2006). Transplanting cityscapes: Townhouse and gated community in globalization and housing commodification. (In F. Wu (Ed.), *Globalization and The Chinese City* (Vol. 7, pp. 190-207). London and New York: Routledge.)
- Wu, F., & Webber, K. (2004). The rise of foreign gated communities in Beijing: between economic globalization and local institutions. *Cities*, 21, 203-213.
- Yusuf, S., & Wu, W. (1997). *The Dynamics of Urban Growth in Three Chinese Cities*. (New York: Oxford University Press.)
- Zhou, K., & Liu, Y. (2006). *Verbal Ana in 2006 (2006 Yulu)*. (Shanghai: Wenhui Publisher.)
- Zhu, j. (2004). Local developmental state and order in China's urban development during transition. *International Journal of Urban and Regional Research*, 28, 424-447.

## **The Cultural Production of Consumerist Landscapes in Global Cities: The Housing Landscape in Shanghai**

**Hsin-Ling WU**

### **Abstract**

This paper explores the importance of the housing landscapes to the cultural imagineering of world/global cities and clarifies the process and characteristics of the cultural production of the housing landscapes. This is achieved through a grounded case study of the housing landscapes in Shanghai, China. Shanghai is devoted to being a global city. The cultural imagineering is a necessary strategy for Shanghai to forge the global city myth and has changed the urban landscape and forms drastically. This paper is divided into two parts. Firstly, by way of analyzing the property advertisement texts, this paper aims to deconstruct one of the urban consumerist spectacles, housing landscape, and clarify how the narratives about ‘nostalgia’ and ‘modernization’ are appropriating to justify the new urban landscapes and what the practicing processes of hybridization and localization are. This is followed by an examination of the meaning of the new transnational lifestyles and tastes accompanying new residential architectures.

**Keywords:** Global city, cultural production, cultural imagining, Shanghai, residential landscape

# **Housing, Neighborhood, and the Social Contacts: A Study of Migrants-Local Integration in Shanghai**

**Danching RUAN and Gina LAI**

Hong Kong Baptist University

## **Abstract**

More than 20 years after the Chinese peasants were allowed to leave their home village and seek a better life, the number of migrants in China has exceeded 100 million. This paper addresses the issue of social integration in Shanghai, the largest city in China. Specifically, the paper examines the residential integration of the migrants in the local neighborhoods. We shall first try to find out the social characteristics of the migrants who are living among the locals, and the social characteristics of the locals who are living with the migrants. Furthermore, we would like to see how the residential pattern is linked to the social connection between the migrants and the local residents. The data for the study comes from a large survey conducted in Shanghai in the summer of 2005.

## Inequalities and Uneven Growth

# Multiple Deprivation in Transitional Chinese Cities: A Case Study of Guangzhou

Yuan YUAN<sup>1</sup>, Fulong WU<sup>2</sup>

1. Department of Urban and Regional Planning, Sun Yat-sen University, Guangzhou, P. R. China

2. School of City and Regional Planning, Cardiff University, Cardiff, UK

## Abstract

In transitional China, many urban residents experience poverty accompanying with the adoption of a market-based economy and the deepening reform of social welfare system since the 1990s. However, the current literature which is mainly concentrated on economic poverty and the outcome of market transition, neglects multiple dimensions of new urban poverty including housing, education etc.

As Guangzhou a case, using the MLSP (Minimum Living Standard Programme) recipients data and fifth census data, this paper calculates index of multiple deprivation on the sub-district scale, analyzes the spatial pattern of urban poverty and multiple deprivation and examines the mechanism of multiple dimensions and spatial differentiation of new urban poverty.

The paper finds the new urban poor concentrated in specific location, mainly in dilapidated residence of inner city and worker villages of inner suburb. The distribution of multiple deprivation was a combination of *multi-dots* and *concentric layers* from inside to outside, while the most deprived areas are in the inner core. Based on the spatial comparison of poverty and deprivation, the paper highlights that deprivation can tell us more on the multiple dimensions and spatial differentiation of new urban poverty in transitional era. There exist two kinds of special areas, one of which is poverty-based area without multiple deprivation, and the other of which is multiple deprived area without poverty concentration. The paper argues this spatial differentiation of new urban poverty is rooted in the uneven outcome of spatial policy both in socialist and transitional China. While some policies in socialist such as inequality in housing provision system, industry and construction policy sowed the seeds of spatial differentiation, some policies in transitional era such as inequality in housing reform, selected regeneration of urban poor communities play important roles in spatial differentiation. Some market factors such as the location, transport condition of poor communities begin to have effects in spatial differentiation. Further discussion indicates economic policy should be adopted in the poverty-based area without multiple deprivation, while a package of regeneration schemas will be applied to multiple deprived areas.

**Keywords:** Urban poverty, multiple deprivation, transition, China

**Poverty Concentration and Determinants in China's Urban Neighbourhoods:  
Evidence from Household Survey in Six Cities**

**Shenjing HE, Fulong WU, Chris WEBSTER**

*School of City and Regional Planning, Cardiff University, Cardiff, UK*

**Abstract**

The new urban poverty characterized by ethnic segregation and social exclusion is well understood in Western literature, while little is known about China's poor urban neighbourhoods, especially their variation in poverty concentration and determinants. Based on a large-scale household survey conducted in 25 poor urban neighbourhoods in six major Chinese cities in 2007, this study provides a better understanding of China's poor urban neighbourhoods. These poor neighbourhoods are categorized into three types: declined workers' villages, dilapidated old urban neighbourhoods, and urban villages. Respondents are also grouped into four categories, namely working urban residents, unemployed/laid-off urban residents, retired urban residents, and rural migrants. This study compares poverty concentration and determinants in different groups of people and in different types of neighbourhoods. We first use location quotient to compare poverty concentration across different types of neighbourhoods as well as different demographic and social groups. Second, we examine the association between poverty incidence and various demographic and socioeconomic attributes in different neighbourhoods and groups, through logistic regressions.

## Uneven Intraurban Growth in Chinese Cities: A Study of Nanjing

Dennis Yehua WEI<sup>1</sup>, Jun LUO<sup>2</sup>

*1. Department of Geography & Institute of Public and International Affairs,  
University of Utah*

*2. Department of Geography, Geology and Planning, Missouri State University*

### **Abstract**

Urban growth is uneven within Chinese cities. Scaling down the research on Chinese cities is essential to better understand local dimensions of urban development. Through a case study of Nanjing, we reveal spatial variations in urban growth patterns. We also employ both global and local logistic regressions to model the probability of urban land expansion against a set of spatial variables. We have found that compared with other fast growing coastal cities, Nanjing remains a relatively compact city. Logistic regression shows the significance of proximity, neighborhood conditions, and urban agglomeration in urban land change. The logistic GWR has uncovered distinctive local patterns of urban growth in Nanjing, shaped by local urban spatial and institutional structures. A probability surface of urban growth provides a clear scenario of urban growth patterns and can be useful for decision making. This study also shows the importance of policy studies and fieldwork in the interpretation of results generated from statistical and GIS modeling.

**Keywords:** Urban growth; uneven development, GWR; Nanjing; China

## **Drifting in the City: Residential History and Mobility of China's Internal Migrants**

**Weiping WU**

*Virginia Commonwealth University, Richmond, VA, USA*

### **Abstract**

Residential patterns and outcomes are particularly informative in the study of adaptation of migrants, as residence is linked to patterns of social interactions and socialization. Residential mobility, in particular, has a tendency to co-vary with social mobility and participation in society. A migrant's housing choices in the city may be affected by a number of factors, chief among which are proximity to employment, duration of residence, employment status, income level, and family status. This paper will empirically assess migrant housing history and mobility in urban China, based on citywide housing surveys conducted in Beijing and Guangzhou in 2005 and 2006. It will first analyze the range of migrant mobility behavior and rates, and temporal and spatial patterns of their moves. The paper will then examine the determinants of migrant housing mobility (including individual, household, and location factors).



## Urbanization and Urban Restructuring

# 中國大都市郊區化進程中的城市土地利用控制研究

敬東 謝倩

上海 JRL 設計機構

**摘要：**論文以大都市郊區化進程中城市土地利用失控特征為切入點，剖析了上海、北京、廣州三個大都市城市土地利用總量失控的現像特征以及目標選擇模糊、實施行為失效和保障制度缺位的本質特征。針對城市土地利用失控的現像特征、本質特征提出了三個方面的對策，即明確發展目標、實施行為有效和保障制度完善。

**關鍵詞：**大都市 郊區化 城市土地利用 失控 控制

## 1 中國大都市的郊區化進程

改革開放以後我國進入了快速、穩定的發展時期，工業化和城市化成為各級政府和社會關注的焦點，逐步出現了人口和產業向郊區轉移的郊區化現像，並且速度越來越快，郊區在大都市發展中的地位舉足輕重<sup>44</sup>。具體表現為 1980 年代郊區小規模開發區的建設和部分工業開始從中心城區向外搬遷<sup>45</sup>；1990 年代在小平同志南巡講話之後，全國範圍內的經濟建設和城市建設全面提速，中心城區工業向郊區轉移和外資企業落戶郊區的力度不斷加大，郊區開始了大規模的開發區、城市新區和大學城建設等，同時郊區房地產大盤時代、商業郊區化的趨勢為郊區化的快速發展推波助瀾。2000 年以後，隨著加入 WTO 和世界製造業基地向我國轉移的速度加快，我國大都市成為世界城市網絡體繫的重要組成部分，推動著我國大都市郊區化步入了全面快速發展時期。在近郊區城市新區建設取得階段性成果的基礎上，遠郊區的新城建設逐漸成為大都市郊區化發展的重點。

## 2 大都市郊區化進程中城市土地利用的狀況

郊區化是人口、產業由中心城區向郊區逐步遷移和郊區城市人口不斷增長、城市產業逐步發展的過程，城市土地利用總量的變化構成了郊區化現像的物質空間特征。

### 2.1 上海大都市郊區化進程中城市土地利用總量的變化特征

表 1：上海市區歷年建成區面積（km<sup>2</sup>）、第二三產業增加值（十億元）、非農業人口（萬人）

	1984	1985	1986	1987	1989	1991	1994	1996	1997	1999	2000	2002
建成區面積	181	184	202	217	248	254	350	370	412	550	750	1100
第二三產業增加值	-	-	-	-	47.7	60.7	150.5	231.0	267.2	359.7	405.8	527.2
非農業人口	673	687	699	711	743	753	825	842	869	923	938	1003

資料來源：國家統計局城市社會經濟調查總隊編. 中國城市統計年鑒（1985、1986、1987、1988、1990、1992、1995、1997、1998、2000、2001、2003），中國統計出版社。

<sup>44</sup>我國學者張庭偉、周一星、王德、寧越敏、石憶邵、孫盤壽、彭震偉、鄧永成、陳文娟、蔡人群、孟延春、周敏、修春亮、高向東、江取珍、伍理、陳怡星、馮建、張文新、張翔等從 1980 年代開始逐步對我國城市郊區化進行了不同角度的研究，得出了我國城市，特別是大都市逐步出現郊區化現像的結論。

<sup>45</sup> 1984 年我國建立了第一個國家級的經濟技術開發區----大連經濟技術開發區。

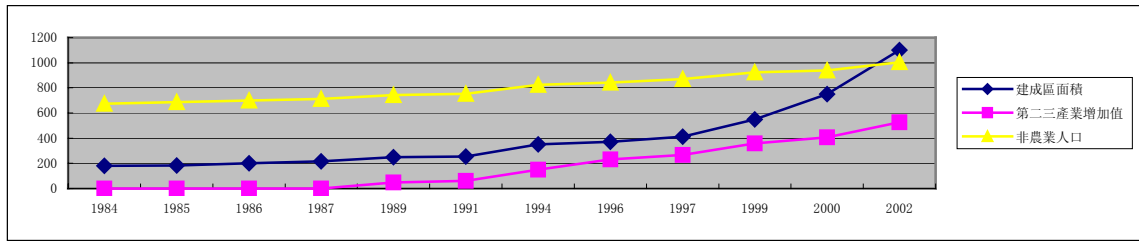


圖 1：上海市區歷年建成區面積、第二三產業增加值、非農業人口變化曲線圖

表 2：上海市區歷年建成區面積、第二三產業增加值、非農業人口年增長率

	1984-1991	1991-1994	1994-1996	1996-1997	1997-1999	1999-2000	2000-2002
建成區面積	5.0%	11.3%	2.8%	11.4%	15.5%	36.4%	21.1%
第二三產業增加值	12.8%	35.3%	23.9%	15.7%	16.0%	12.8%	14.0%
非農業人口	1.6%	3.1%	1.0%	3.2%	3.1%	1.6%	3.4%

資料來源：國家統計局城市社會經濟調查總隊編. 中國城市統計年鑒（1985、1986、1987、1988、1990、1992、1995、1997、1998、2000、2001、2003），中國統計出版社。

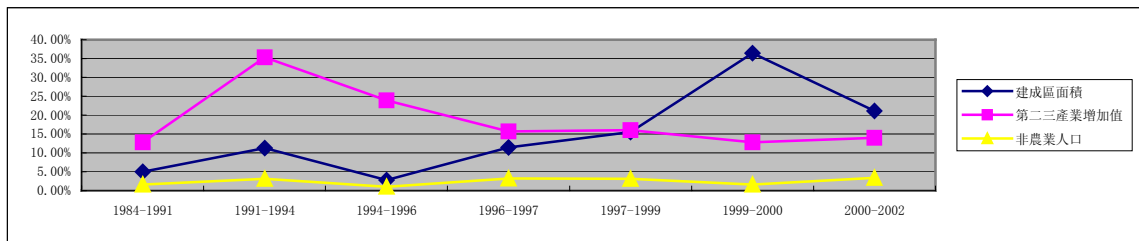


圖 2：上海市區歷年建成區面積、第二三產業增加值、非農業人口增長率變化曲線圖

上海市區 1947-1979 年 32 年間共完成建成區面積 77.9km<sup>2</sup>，1979-1994 年 14 年間共完成建成區面積 196.26km<sup>2</sup>，是 1947 年建成區面積的 4 倍。1994 年以浦東新區為代表的郊區化進程的加速，隻用了 5 年的時間就將建成區面積從 365.66km<sup>2</sup> 增加到 550km<sup>2</sup>，每年平均完成建成區面積 36.87km<sup>2</sup>，總計完成 184.34km<sup>2</sup>，是 1994 年總建成區面積的 1.5 倍。上海市在 1989-1999 年期間的市區建成區土地面積和市區第二、三產業增加值總量的增長速度基本保持一致，在 1999 年以後建成區土地面積的增長速度高於第二、三產業增加值總量的增長速度。其中，2002 年第二、三產業的增加值比 1999 年增加了約 47%，同時建成區的土地面積增加了約 100%，土地總量的增長速度高於第二、三產業增加值總量的增長速度。2002 年第二、三產業的增加值比 1994 年增加了約 2.5 倍，同時建成區的土地面積增加了 2.14 倍，土地總量的增長速度略小於第二、三產業增加值總量的增長速度。2002 年第二、三產業的增加值比 1989 年增加了約 10 倍，同時建成區的土地面積增加了約 3.44 倍，城市土地利用總量的增長速度遠遠小於第二、三產業增加值總量的增長速度。可以認為，上海市市區建成區面積在快速擴大的同時，土地利用總量的速度從遠遠小於第二、三產業增加值總量的增長速度到逐漸接近，最後高於第二、三產業增加值總量的增長速度，同時建成區地均第二、三產業增加值總量 1989、1994、1999、2000 和 2002 年分別為 1.92 億元/km<sup>2</sup>、4.30 億元/km<sup>2</sup>、6.54 億元/km<sup>2</sup>、5.41 億元/km<sup>2</sup>、4.79 億元/km<sup>2</sup>，表明地均第二、三產業增加值在 1999 年達到一個較高值之後開始下降，同時證明 1990 年代以後市區建成區土地的利用不經濟的因素在增加，城市經濟增長對城市土地粗放性利用的依賴性逐漸加大。

上海市區的非農業人口在郊區化進程中隨著市區範圍的擴大而逐漸增長，從 1984-2002 年間非農業人口的年增長率基本保持在 1.0%-3.5%之間，與市區建成區面積和第二、三產業增加值總量的年增長率變化幅度較大相比顯得很平穩。市區非農業人口人均建成區面積從 1984 年的 27m<sup>2</sup> 上升到 2002 年的 110 m<sup>2</sup>，在 2002 年建成區面積比 1984 年增長了 5 倍的同時，非農業人口卻隻增長了 49%，這種結果在說明了 1984 年人均建設用地面積指標過低，不符合良好人居環境對土地的基本要求的同時，也表明了建成區面積增加過快，超過了國

家指標對特大城市的指標規定，造成城市土地利用不集約化。

從市區歷年建成區面積、第二三產業增加值和非農業人口分析的結果看，上海大都市在郊區化進程中城市土地利用總量的增長超過了經濟增長和人口增長對土地的需求，市區建成區面積增長過快，城市土地利用總量處於失控狀態。

## 2.2 北京大都市郊區化進程中城市土地利用總量的變化特征

表 3：北京市區歷年建成區面積（km<sup>2</sup>）、第二三產業增加值（十億元）、非農業人口（萬人）

	1984	1985	1986	1987	1989	1991	1994	1996	1997	1999	2000	2002
建成區面積	366	373	380	387	395	397	467	474	481	488	670	1006
第二三產業增加值	-	-	-	-	39.5	48.8	96.4	116.4	126.3	177.7	226.9	304.4
非農業人口	498	510	522	547	569	583	609	627	653	700	727	788

資料來源：國家統計局城市社會經濟調查總隊編. 中國城市統計年鑒 1985、1986、1987、1988、1990、1992、1995、1997、1998、2000、2001、2003，中國統計出版社。

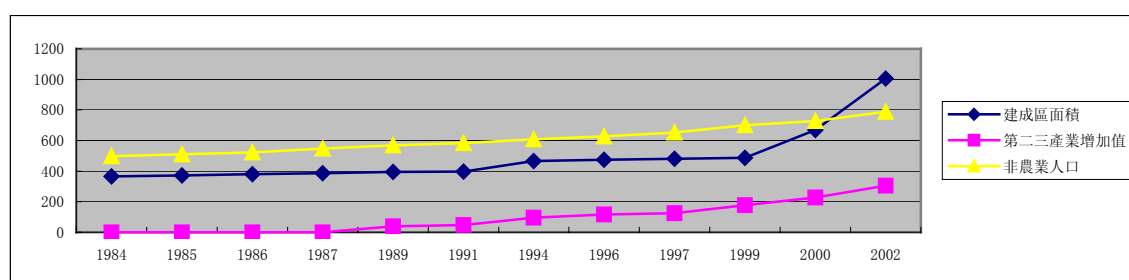


圖 3：北京市區歷年建成區面積、第二三產業增加值、非農業人口變化曲線圖

北京市市區在 1984-1999 年間，市區建成區面積增長率 and 市區第二三產業增加值、市區非農業人口年增長率基本保持一致，但是在 1999-2002 年間發生了較大的變化，市區建成區面積增長率超過市區第二三產業增加值年增長率 7-10 個百分點，超過市區非農業人口年增長率 18-30 個百分點。其中，2002 年第二、三產業的增加值比 1999 年增加了約 71%，同時建成區的土地面積增加了約 106%，土地總量的增長速度高於第二、三產業增加值總量的增長速度。2002 年第二、三產業的增加值比 1994 年增加了約 2.2 倍，同時建成區的土地面積增加了 1.2 倍，土地總量的增長速度小於第二、三產業增加值總量的增長速度。2002 年第二、三產業的增加值比 1989 年增加了約 6.7 倍，同時建成區的土地面積增加了約 1.5 倍，城市土地利用總量的增長速度遠遠小於第二、三產業增加值總量的增長速度。可以認為，北京市市區建成區面積在快速擴大的同時，土地利用的總量的速度從遠遠小於第二、三產業增加值總量的增長速度到逐漸接近，最後高於第二、三產業增加值總量的增長速度。目前北京土地資源的消耗速度過快，1999 年以來土地資源消耗平均增長速度高達 73.4%，遠遠超出同期經濟增長的速度，征用土地中農用地比例最高。土地征後的用途 37% 用於住宅建設，23% 用於交通建設。按目前占地量和增長速度計算，北京未利用的 18 萬公頃土地，用不了 30 年基本上就被耗盡<sup>46</sup>。同時，建成區地均第二、三產業增加值總量 1989、1994、1999、2000 和 2002 年分別為 1 億元/km<sup>2</sup>、2.06 億元/km<sup>2</sup>、3.64 億元/km<sup>2</sup>、3.39 億元/km<sup>2</sup>、3.03 億元/km<sup>2</sup>，表明地均第二、三產業增加值在 1999 年達到一個較高值之後開始下降，同時證明 1990 年代以後市區建成區土地的利用不經濟的因素在增加，城市

<sup>46</sup>一個迫切需要解決的問題--北京市發改委主任丁向陽談資源調控與節約利用，  
<http://www.qianxian.com/llxj/content.asp?TempNum=5762>

經濟增長對城市土地粗放性利用的依賴性逐漸加大。這些現象與上海市表現出驚人的一致。

表 4：北京市區歷年建成區面積、第二三產業增加值、非農業人口年增長率

	1984-1991	1991-1994	1994-1996	1996-1997	1997-1999	1999-2000	2000-2002
建成區面積	1.2%	5.6%	0.7%	1.5%	0.7%	37.3%	22.5%
第二三產業增加值	11.1%	25.5%	9.9%	8.6%	18.6%	27.7%	15.8%
非農業人口	2.3%	1.5%	1.5%	4.1%	3.5%	3.9%	4.1%

資料來源：國家統計局城市社會經濟調查總隊編. 中國城市統計年鑒 1985、1986、1987、1988、1990、1992、1995、1997、1998、2000、2001、2003，中國統計出版社。

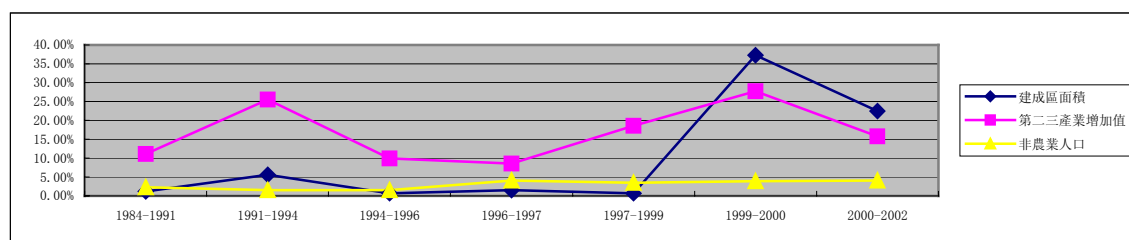


圖 4：北京市區歷年建成區面積、第二三產業增加值、非農業人口增長率變化曲線圖

北京市區的非農業人口在郊區化進程中隨著市區範圍的擴大而逐漸增長，從 1984-2002 年間非農業人口的年增長率基本保持在 1.5%-4.1%之間，與市區建成區面積和第二、三產業增加值總量的年增長率變化幅度較大相比顯得很平穩。市區非農業人口人均建成區面積從 1984 年的 73.5m<sup>2</sup> 上升到 2002 年的 127.7 m<sup>2</sup>，在 2002 年建成區面積比 1984 年增長了 1.75 倍的同時，非農業人口卻隻增長了 58%，這種結果表明了建成區面積增加過快。

從市區歷年建成區面積、第二三產業增加值和非農業人口分析的結果看，北京大都市在郊區化進程中城市土地利用總量的增長超過了經濟增長和人口增長對土地的需求，特別是在 1999 年以後市區建成區面積增長過快，城市土地利用總量失控。

### 2.3 廣州大都市郊區化進程中城市土地利用總量的變化特征

表 5：廣州市區歷年建成區面積 (km<sup>2</sup>)、第二三產業增加值 (十億元)、非農業人口 (萬人)

	1984	1985	1986	1987	1989	1991	1994	1996	1997	1999	2000	2002
建成區面積	150	158	166	174	182	190	216	262	267	284	431	750
第二三產業增加值	-	-	-	-	22.5	30.7	68.6	100.3	113.6	142.4	210.0	266.0
非農業人口	249	257	265	272	288	295	311	322	327	337	401	465

注：廣州市城市總體規劃 (2001-2010 年) 送審稿中統計 2001 年底廣州市市區的建成區面積達到 707.0 km<sup>2</sup>，其中中心組團 (八大區) 368.5 km<sup>2</sup>，番禺組團 233.83 km<sup>2</sup>，花都組團 86.67 km<sup>2</sup>，和統計年鑒上有一定出入，最後分析採用了總體規劃的數據，推斷 2002 年底廣州市市區的建成區面積達到 750km<sup>2</sup> 左右。

資料來源：國家統計局城市社會經濟調查總隊編. 中國城市統計年鑒 1985、1986、1987、1988、1990、1992、1995、1997、1998、2000、2001、2003，中國統計出版社。

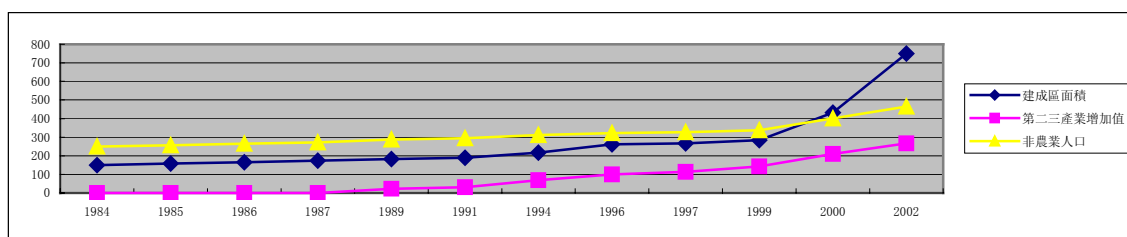


圖 5：廣州市區歷年建成區面積、第二三產業增加值、非農業人口變化曲線圖

廣州市市區在 1984-1999 年間，市區建成區面積增長率 and 市區第二三產業增加值、市區非農業人口年增長率基本保持一致，但是在 1999-2002 年間發生了較大的變化，這中間有廣州市行政區劃調整所帶來的變化，但是最根本的原因還是城市土地利用總量的失控。市區建成區面積增長率超過市區第二三產業增加值年增長率 4-19 個百分點，超過市區非農業人口年增長率 24-33 個百分點。其中，2002 年第二、三產業的增加值比 1999 年增加了約 87%，同時建成區的土地面積增加了約 164%，土地總量的增長速度高於第二、三產業增加值總量的增長速度約 2 倍。2002 年第二、三產業的增加值比 1994 年增加了約 2.9 倍，同時建成區的土地面積增加了 2.5 倍，土地總量的增長速度小於第二、三產業增加值總量的增長速度。2002 年第二、三產業的增加值比 1989 年增加了約 10.8 倍，同時建成區的土地面積增加了約 3.1 倍，城市土地利用總量的增長速度遠遠小於第二、三產業增加值總量的增長速度。可以認為，廣州市市區建成區面積在快速擴大的同時，土地利用的總量的速度從遠遠小於第二、三產業增加值總量的增長速度到逐漸接近，最後高於第二、三產業增加值總量的增長速度，建成區地均第二、三產業增加值總量 1989、1994、1999、2000 和 2002 年分別為 1.23 億元/km<sup>2</sup>、1.78 億元/km<sup>2</sup>、5.01 億元/km<sup>2</sup>、4.87 億元/km<sup>2</sup>、3.55 億元/km<sup>2</sup>，表明地均第二、三產業增加值在 1999 年達到一個較高值之後開始下降，同時證明 1990 年代以後市區建成區土地的利用不經濟的因素在增加，城市經濟增長對城市土地粗放性利用的依賴性逐漸加大。這些現象與上海、北京表現出驚人的一致。

表 6：廣州市區歷年建成區面積、第二三產業增加值、非農業人口年增長率

	1984-1991	1991-1994	1994-1996	1996-1997	1997-1999	1999-2000	2000-2002
建成區面積	3.4%	4.4%	10.1%	1.9%	3.1%	51.8%	31.9%
第二三產業增加值	16.8%	30.7%	20.9%	13.3%	12.0%	47.5%	12.5%
非農業人口	2.5%	1.8%	1.8%	1.6%	1.5%	19.0%	7.7%

資料來源：國家統計局城市社會經濟調查總隊編. 中國城市統計年鑒 1985、1986、1987、1988、1990、1992、1995、1997、1998、2000、2001、2003，中國統計出版社。

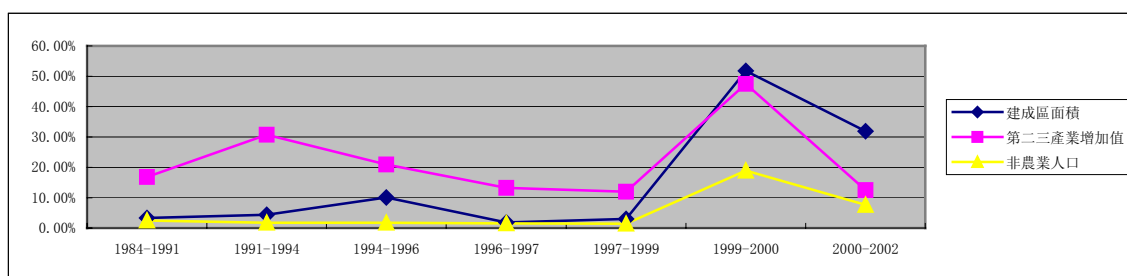


圖 6：廣州市區歷年建成區面積、第二三產業增加值、非農業人口增長率變化曲線圖

廣州市區的非農業人口在郊區化進程中隨著市區範圍的擴大而逐漸增長，在 2000 年行政區劃調整時出現一個高峰，與市區建成區面積和第二、三產業增加值總量的年增長率變化幅度較大相比顯得很平穩。市區非農業人口人均建成區面積從 1984 年的 60.2m<sup>2</sup> 上升到 2002 年的 161.3 m<sup>2</sup>，在 2002 年建成區面積比 1984 年增長了 4 倍的同時，非農業人口卻隻增長了 87%，這種結果表明了建成區面積增加過快。

從市區歷年建成區面積、第二三產業增加值和非農業人口分析的結果看，廣州大都市在郊區化進程中城市土地利用總量的增長超過了經濟增長和人口增長對土地的需求，特別是在1999年以後市區建成區面積增長過快，城市土地利用總量失控。

### 3 城市土地利用失控的現像特征和本質特征

#### 3.1 現像特征

##### 3.1.1 城市空間結構松散

郊區化進程中三個大都市空間緊湊度逐漸下降，空間拓展模式從向心集聚之後逐步過渡到向四周蔓延填充，表現為“圈層+軸向+節點”的空間形態特點，通過空間形態測定指數的計算認定三個大都市空間形態由緊湊發展向分散蔓延發展轉變。開發建設遍地開花，導致城市以“攤大餅”的方式蔓延擴展，造成城市土地資源、基礎設施等無法集約利用。

##### 3.1.2 城市土地利用總量失控

在分析了三個大都市市區歷年建成區面積、第二三產業增加值和非農業人口的關係後得出隨著大都市郊區化進程的加速，市區建成區面積的年增長速度逐步高於第二三產業增加值和非農業人口年增長速度，城市土地利用效率和經濟性逐年降低。

##### 3.1.3 城市土地利用結構失衡

總量、結構和開發強度是城市土地利用三個最重要的特征，在中心城區城市土地利用結構變化特征的研究中認為中心城區在人均建設用地面積比較小的背景下，表現為工業用地比重過高，居住、公共服務設施、公共綠地、道路廣場用地比重偏低，特別與國際化大都市中心城區指標存在相當的差距。在近郊區和遠郊區城市土地利用結構變化特征的研究中，認為目前郊區人均建設用地面積、四大類用地比重和面積均遠遠超過國家標準，其中工業用地面積和比重偏大是主要原因，這是工業郊區化和工業用地的粗放性使用所造成的，另外，公共服務設施用地比重偏低也是普遍性現像，統一表現為市域範圍內的城市土地利用結構失衡。

##### 3.1.4 城市土地開發強度失當

中心城區普遍開發強度較大，表現為容積率較高和建築密度偏大，因為中心城區最好的交通區位和服務區位導致開發強度失去控制。隨著郊區交通區位和服務區位的不斷完善，再加上較好的自然環境，郊區居住用地的開發強度有一定提高，但是整體上郊區城市土地利用粗放，開發強度低，通過對大量的工業用地建築容積率、建築密度、土地產出率和投資強度的分析，可以看出目前三個大都市郊區工業用地的利用與國際標準存在巨大差距。

#### 3.2 本質特征

##### 3.2.1 發展目標模糊

###### 1、發展目標層次性的模糊

中央政府強調可持續發展是基本國策，事實上很多地方政府熱衷於急功近利，與可持續發展的目標背道而馳。因為地方政府更關注局部和眼前利益，而偏離了整體和長遠利益，往往局部和眼前利益的最優卻形成了經濟學上的“合成謬誤”，最後導致了整體和長遠利益的損失。這種發展目標的層次性模糊也反映在貫徹執行土地管理法律法規上，地方政府不能同中央政府保持一致，這也是歷次土地利用失控以後清理整頓出現反彈的根本原因之一。另外，城市之間、城市內部各行政主體之間在產業發展等領域的惡性競爭又加劇了這種博弈。

###### 2、發展目標階段性的模糊

目標有局部與整體之分，同時又有近期與長遠之別。中央政府的目標選擇集中反映了階段性的特點，在改革開放初期的時候，其目標選擇更多關注眼前的成就，而將方式的選擇和成本、進程的影響置於從屬的地位，從“改革沒有先路可走，隻能摸著石頭過河”、“改革互無前人，總要付出代價”，到“發展是硬道理”、“白貓黑貓，抓住老鼠就是好貓”、“效率優先，兼顧公平”等等，現階段提出“可持續發展”、“以人為本”、“科學發展觀”、“五個統籌”、“和諧社會”等等，都是反映不同發展階段所採取的不同對

策。

中央政府的目標價值觀演進反映了執政黨對不同階段經濟社會發展的認識和決策，客觀地說是理性的、科學的，但是這個長遠的終極目標，類似城市總體規劃遠景目標，缺乏目標的階段性分解。並且由於我國城市現狀發展基礎差距巨大，起點不同的城市必然選擇不同的發展目標，而這些階段性目標的選擇則構成了各級地方政府的困惑和難點。

### 3.2.2 實施行為失效

#### 1、城市發展行為的失效

通過前面的分析我們可以判斷大都市郊區化進程中城市土地利用的總量超過了經濟發展和人口增長對土地的需求，地均 GDP 的產出在 1999 年以後下降，反映出大都市的經濟增長是建立在城市土地的大量消耗基礎之上，這是城市發展行為中經濟增長方式選擇的失效，即在追求經濟集約型發展的目標下實際選擇了粗放型的經濟增長方式。其次，大量流動人口的湧入一方面增加了城市公共物品的壓力和緊張，另一方面城市郊區非農業人口人均用地面積過大，大都市人口增長過快以及過度城市化的趨勢對土地產生了巨大和不合理的需求，因此城市發展行為中缺乏對社會和諧發展的控制和引導，使得大都市城市人口總量失控，平均素質提高不快，就業人口結構和比重不合理；另外，由於城市發展行為中過多強調經濟發展，對生態環境資源造成了巨大的破壞，在 GDP 的統計中不計算外部不經濟性對整個城市和區域未來發展和生存環境的影響，與城市可持續發展的長期行為相違背，使城市發展行為失效；最後，城市發展行為中沒有協調好經濟發展和社會發展的關繫，在城市土地利用過程中對失地農民安置問題缺乏相應的對策，引發了社會不穩定的因素，也對國家的糧食安全造成隱患。

#### 2、城市規劃行為的失效

##### (1)、集中或分散策略的失效

從 1990 年代《城市規劃法》中所規定的“國家實行嚴格控制大城市規模，合理發展中等城市和小城市”，到 2005 年提出的大中小城市和小城鎮協調發展<sup>47</sup>，由於觀念的不同和自上而下一直缺乏相配套的策略出臺，導致法規文件形同虛設，大城市、特大城市和超大城市發展迅速，中、小城市發展發展緩慢，而大城市的迅速發展大部分又是建立在分散發展的基礎上，使城市土地利用處於失控狀態。

##### (2)、某些規劃編制的失效

確定城市土地利用目前在我國有二種法定的途徑，一種是城市總體規劃對土地利用總量和結構的確定，而另一種就是土地利用總體規劃。二者的出發點完全不同，前者主要解決城市性質、發展目標、產業選擇、空間功能結構、土地利用等方面的問題，從城市發展目標的需求預測城市人口規模並根據相應的指標推算城市建設用地總量，後者是從保持城市所在行政區劃範圍內一定的糧食和農產品自給比重確定耕地總面積。所以，在編制土地利用總體規劃時，很難掌握國民經濟發展趨向、生產力布局、國土開發整治等各行業、各方面的用地需求，由上一個層次編制的土地利用總體規劃分解的年度用地計劃往往也與當年各項建設用地需要有很大差距，這就使土地規劃很難達到預見性和實用性的要求。另一方面，受地方政府急於出政績，加快城鎮化進程思想的影響，擴大城市用地規模的剛性要求遠遠大於土地利用總體規劃的約束。其次，土地利用總體規劃後天營養不良。在編制方法上強調了公眾參與，但公眾參與度不夠<sup>48</sup>。鑒於經濟發展和糧食安全同時作為我們的基本國策，城市規劃理論隻能解釋二者矛盾之所在，但是沒有理論提供解決辦法，最後的結果隻能各行其是和失控。雖然我們編制了各種控制城市土地利用蔓延的法定性規劃（包括城市總體規劃、土地利用總體規劃和土地利用年度計劃），同時為這些規劃和計劃的實施制定了各種的法律、法規和政策，但是在具體落實的時候卻遭遇到各種矛盾和現實的抵制，規

<sup>47</sup>胡錦濤在中共中央政治局第 25 次集體學習時強調：“堅持走中國特色的城鎮化道路，推動我國城鎮化健康有序發展”。文彙報，2005-10-1。

<sup>48</sup>肖乃金.淺談當前土地管理存在問題的成因及化解的對策.上海土地，2005[1].p14



劃和年度計劃被頻頻突破。

### 3.2.3 保障制度缺位

發展目標選擇和實施行為必須依賴制度的保障，雖然我國在 1986 年成立了直屬國務院領導的國家土地管理局並制定了《土地管理法》，但是對城市土地利用的管理在國家五級行政管理的縱向方面和與其它行政主管部門的橫向方面一直運作不暢，除了土地使用制度本身需要進一步完善之外，主要表現在體制、機制和法制三個方面制度建設的缺位。經濟學家巴曙松分析，如果是一個或者幾個城市在“土地經營”方面出現問題，那可能是這幾個城市的經營理念和運作的問題。如果是在較大範圍內出現這種問題，那麼，這必然是制度性的問題。斯蒂格裡茲論證過“市場失靈”是基於“信息不對稱性”，弗裡德曼論證過“非市場失靈”和“政府失靈”是基於“官僚化”的政府行為，同樣“制度失靈”也是源於政府在某些制度的制定和執行方面缺乏緊迫感和責任感<sup>49</sup>。“市場失靈”的危害性是有限的和局部的，“合成謬誤”也是針對某個產業結構和特定商品產生的，難以擴展到整個市場。而“非市場失靈”和“政府失靈”如果不加以控制，將會導致“普遍失靈”----即普遍的無效率或少作為，由於政府所壟斷的資源、市場信息、制度的制定和權力，其後果將不堪設想。

## 4 控制對策一：明確發展目標

### 4.1 發展目標的階段性

#### 4.1.1 目標類型

不同的目標選擇反映了哲學層次上價值觀的不同追求，對各級政府的決策產生了直接的影響，具體表現為對於城市經濟增長、社會發展和資源利用三個方面問題的回答。根據研究分析，與大都市城市土地利用直接相關的主要有三項重要指標，分別是城市 GDP 總量、城市人口總量和城市土地利用總量，下圖的三條直線分別代表了城市的 GDP 總量、城市人口總量和城市土地利用總量<sup>50</sup>，研究認為這三項指標圖譜可以比較準確地反映決定大都市土地利用總量和另外二個主要變量的關繫<sup>51</sup>。除此之外，大都市的城市化水平、生態環境承載力和耕地面積等也是重要的變量影響因素。

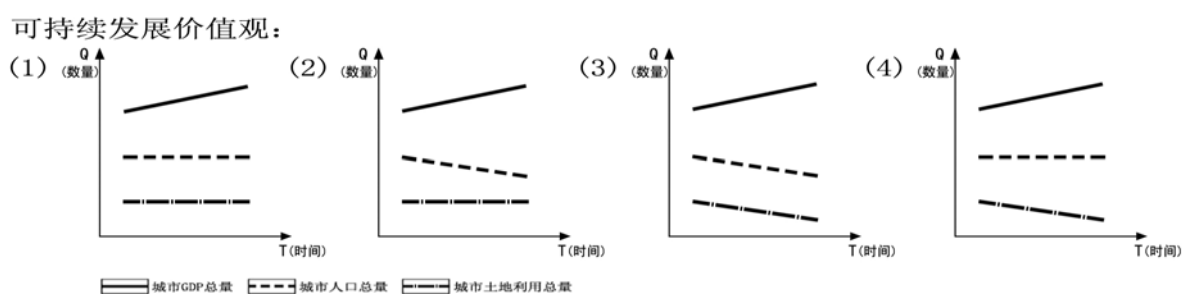


圖 7：可持續發展的目標價值觀圖譜

可持續發展的目標價值觀圖譜主要表現為城市 GDP 總量處於不斷上升的狀態，反映了社會在不斷地創造新的財富，而城市人口總量和城市土地利用總量處於基本沒有變化或者下降的狀態。

## 5 控制對策二：實施行為有效

### 5.1 城市發展行為

#### 5.1.1 轉變經濟增長方式

北京作為首都，全國政治中心和文化中心，科技力量雄厚，又是我國經濟發達地區，應當

<sup>49</sup>汪丁丁. 為什麼“政府失靈”比“市場失靈”更危險. 上海信息中心等, 2004[7]. P5

<sup>50</sup>這裡的“城市 GDP 總量、城市人口總量和城市土地利用總量”三項指標主要針對建成區範圍內的城市常住人口、第二、三產業增加值和建成區面積，與前面的研究分析思路基本保持一致。

<sup>51</sup>如果將城市人口總量作為因變量，其它二個指標作為自變量，也會得到類似的結論。

率先實現經濟增長方式的轉變；但同時，北京作為二千萬人左右的特大型城市，資源供給不足已成為經濟社會發展的重要制約因素，如人均水資源不足 400m<sup>3</sup>，隻有全國人均量的 1/7。目前地下水超量開采已達 40 億 m<sup>3</sup>，每年消耗 3000 多萬噸標準煤。預計到 2010 年每年消耗量將達 4000 多萬噸標準煤，其中 95%需要靠外地調入，不僅加劇運輸緊張，而且難以控制環境質量。可利用的建設用地也所剩不多，今後再走鋪攤子、上新項目、靠規模擴張的道路已沒有多少餘地，必須轉變經濟發展的指導思路，充分發揮北京作為首都的各種優勢，走投入少、消耗低、產出高、效益好的發展道路。規劃 2020 年人均地區生產總值（GDP）突破 10000 美元；第三產業比重超過 70%，第二產業比重保持在 29%左右，第一產業比重降到 1%以下。

上海經濟發展正處在由投資導向向創新導向轉變的階段中。如果說，與要素導向的發展階段相對應的是粗放型增長方式，與創新導向的發展階段相對應的是集約型增長方式，那麼投資導向的發展階段相對應的可稱之為準集約型增長方式。上海經濟增長方式雖然仍未擺脫粗放型增長的陰影，但已經處於準集約型增長階段，或者說處在加速向集約型增長轉換的關鍵階段中。從經濟發展階段看，上海轉變經濟增長方式區別於全國的不同之處，就在於不是從要素導向的粗放型增長轉向投資導向的準集約型增長，而是要從準集約型增長開始向以創新為特征的集約型增長轉變。上海製造業的權重至少在短期內仍將大於金融業的權重，在製造業轉移、金融業尚未崛起的過渡時期，上海可能面臨一段周期波動。製造業尤其是外資生產基地的大規模外遷給人一種彼長我消，逐漸被邊緣化的感覺，暫時的邊緣化實際並非下策。

廣州在人均 GDP 達到 6000 美元以後，其經濟社會也進入一個關鍵發展階段，同時，也面臨不少新的矛盾和問題。市場秩序不夠完善和政企不分現象影響了市場對資源配置的基礎性作用，降低了經濟效率和效益；經濟結構有待調整，企業人纜隊伍建設相對滯後，跨省際乃至影響東南亞的綜合性大型企業集團相對較少，金融中心地位有待進一步加強，城鄉一體化程度有待提高，農村基礎設施建設仍較薄弱，成了構建和諧廣州的重點和難點；經濟社會發展不平衡、可持續發展壓力較大、城鄉二元結構有待進一步破解等。由此可見，積極推動廣州經濟社會發展模式轉型對於廣州來說，是非常迫切的。

市場經濟的本質就是不斷制造過剩，物質生產、消費極大飽和以後，人們必然轉而追求那些附加著獨特品質、包含著某些個性價值觀的東西，即對精神層面的生產和消費提出更高要求，相較於生產能力此類消費不僅不會過剩，反而會激發出源源不斷的引致需求，過剩的痼疾在看似漫不經心的轉變中被化解於無形。按照國際中心城市發展的一般規律，工業化完成後，第三產業，尤其是服務於生產的現代服務業占 GDP 的比重重要上升到 60%-70%，三個大都市的發展也將遵循這一規律。城市功能升級具有二重性，一重是城市生產性功能自身的升級，一重是生產性功能向消費性功能升級。對同一城市，這二重功能升級相輔相成，並行不悖。

#### 5.1.2 對城市人口控制總量、提高素質和改善結構

##### 1、提高市區非農業人口人均 GDP 年增長率<sup>52</sup>

1989-2002 年三個大都市市區第二三產業增加值年均增長速度都大於市區非農業人口人均第二三產業增加值年均增長速度，在 1997 年以前二者的增長速度比較接近，但是在 1997 年特別是 1999 年以後，市區非農業人口人均第二三產業增加值年均增長速度就遠遠落後於市區第二三產業增加值年均增長速度，如果將暫住人口和農業人口統一進行計算，人均年均增長速度將更低。原因是二方面的，一個是市區非農業人口數量增長過快，另一個原因是人均第二三產業增加值年均增長速度較慢。可以初步認為，市區非農業人口人均為城市貢獻的財富效率在逐年下降，就業人口素質的整體水平提高不快，城市財富的增長更大程度上依賴人口總量的增加，而不是個體財富產出率的增加。如果不進行調整，這樣的後果隻可能是越來越快的經濟增長速度和越來越大的經濟總量將需要更多的城市人口作為支

<sup>52</sup>為了更加客觀地反映大都市 GDP 年增長率的特點，仍然選用市區第二、三產業增加值進行分析。

撐。

## 2、三次產業就業人口比重的調整

表 7：三個大都市主要年份按第一、二、三次產業分類就業人口比重

	1989	1991	1994	1996	1997	1999	2000	2002
上海	12：59：29	11：59：30	10：56：34	10：52：38	10：49：41	9：45：46	12：42：46	11：41：48
北京	15：45：40	14：44：42	11：44：45	11：39：50	11：39：50	12：35：53	12：33：55	10：35：55
廣州	29：36：35	28：37：35	24：37：39	23：35：42	22：38：40	20：39：41	19：40：41	19：38：43

資料來源：《中國城市統計年鑒》1990、1992、1995、1997、1998、2000、2001、2003，中國統計出版社。

表 8：三個大都市主要年份產業結構比例

	1989	1991	1994	1996	1997	1999	2000	2002
上海	4：67：29	4：64：32	3：58：39	3：54：43	2：52：46	2：48：50	2：47：51	2：47：51
北京	8：55：47	8：52：40	7：46：47	5：42：53	5：41：55	4：39：57	4：38：58	3：35：62
廣州	8：45：47	7：47：46	6：47：47	6：47：47	5：47：48	4：46：50	4：43：53	3：41：56

資料來源：《中國城市統計年鑒》1990、1992、1995、1997、1998、2000、2001、2003，中國統計出版社。

三個大都市的三次產業結構比重逐漸發展成爲一個比較合理的結構，但是三次產業的從業人員比重卻存在一定程度的不合理。首先，第一產業就業人口比重過高，雖然從 1989-2002 年第一產業就業人口比重在逐步下降，但在 2002 年全部仍都在 10%以上，廣州市甚至接近 20%；其次，第三產業就業人口比重距離發達城市還存在相當的距離，紐約、東京、倫敦、新加坡和巴黎第三產業就業人口比重分別爲 88.7%、76.2%、86.2%、65.8%和 81%，基本上高出三個大都市約 30 個百分點，從業人員三次產業比例接近 0：20：80。因此，大都市在控制城市人口總量的同時，必須逐漸調整三次產業就業人口比重，降低第一、二產業就業人口比重，提高第三產業就業人口比重，提高城市整體生產效率水平。

### 5.1.3 保障生態環境安全

#### 1、科學確定環境承載力

環境承載力主要要解決生態環境約束、生態環境供給和生態環境安全的問題，目前我們認爲水資源、能源、糧食、大氣環境等基本性的供給將決定城市發展的極限，這是對傳統的經濟、社會可以無限制發展的一種挑戰，也印證了羅馬俱樂部提出的“增長的極限”（the limits of growth）和零增長的理念。

#### 2、嚴格控制大都市的人口規模和建築容量

衡量城市發展的水平，不單純是經濟指標，而是經濟、資源、人文和環境的綜合評價。國際大都市的發展經驗表明，要保持大都市生態環境質量，必須嚴格控制人口規模和建築容量。目前，在三個大都市建設和改造中出現了中心城建築容量過大、高層建築總量過多、布局不夠合理等問題。這些問題如不及時加以解決，將影響人口向郊區疏解，以及城市建設重點轉向郊區的城市總體戰略目標的實現，將導致交通擁擠、市政公用設施容量超載、城市基礎設施服務能力和水平降低，生態環境惡化，城市綜合防災、抗災能力降低等矛盾，造成對城市發展的危害。因此，中心城建設必須與人口疏解、功能提升、環境改善和景觀優化相結合，必須充分發揮城市規劃的綜合調控作用，增加公共綠地，增加公共活動空間，減少容積率，減少建築總量。

## 5.2 城市規劃行爲

### 5.2.1 緊湊和組團型城市空間發展模式

以培育郊區若干個具有很強獨立性和人口集聚力、承擔部分整個城市支柱性產業的核心組團新城分擔中心城壓力，同時在新城與中心城市之間進行生態環境爲先導的整體整合、需要很強的規劃導向力的模式。這種模式在短期內的成本較高，包括建設成本、管理

成本等，但以遠期的總體利益衡量，這是一條能夠保障城市經濟、生態環境持續健康發展的未來之路。在城市遠郊區域選擇若干個有一定基礎的城鎮作為核心城市進行培育，形成以這些核心組團新城為核心，周邊城鎮圍繞核心城市發展的格局，成為遠郊區域對抗中心城的反磁力中心，達到疏解中心城人口及產業的最終目標。

### 5.2.2 城市土地利用總量控制

#### 1、總量控制

城市土地利用總量控制一般從供給和需求二個角度加以控制和引導，一方面需要從大都市城市土地開發容量、環境適應性、生態容量、社會容量、政治和財政容量、固定資本和公用設施容量等角度分析大都市城市土地的供給能力，把握控制城市土地供給的極限狀態和底線；另一個方面需要從盤活存量、控制增量的角度控制城市土地利用總量，特別是大都市郊區是主要的土地利用增量地區，需要從提高郊區建成區就業密度和人口密度，降低人均用地面積，提高郊區建成區的資本密度和土地產出率，促進增量集約這二個方面來控制增量。並且認為大都市城市土地的供給能力需要從多個學科的研究成果中綜合得出，應該取下限，而不是上限。需求控制中地方政府應該充分利用存量，中央政府應該嚴格控制增量。

#### 2、大都市城市土地存量優化----地方政府盤活存量

從城市用地看，立足建成區改造挖潛，既可以實施舊城更新，又可以為城市各項功能拓展提供空間，還可以節約用地。把城市土地存量的未利用、不合理利用、未有效利用、超過出讓期土地以及部分城市規劃用地整合起來，無疑有助於促使城市土地供應實現由“增量調節為主”向“存量調節為主”轉變。這對於從制度上保障耕地保護這一基本國策的實施具有十分重要的戰略意義。

#### 3、大都市城市土地增量集約----中央政府控制增量

##### (1) 提高郊區建成區就業密度和人口密度，降低人均用地面積

這樣纔能從根本上保證郊區城市土地利用結構合理和在一定程度上混合使用，避免城市人口密度晝夜的巨大變化。城市人口密度的晝夜變化越大，城市就業中心的空間集聚強度也就越大，人們的工作地點與居住地點的空間分離也就越明顯<sup>53</sup>。與此同時積極實行三個集中，目前三個大都市農村人均宅基地面積為 200-220 m<sup>2</sup> 左右，在郊區城市化的同時每轉移一個農村人口將節約用地 200-220 m<sup>2</sup> 左右。

##### (2) 提高郊區建成區的資本密度和土地產出率，促進增量集約

目前三個大都市在地價很高的核心城區和邊緣城區開發高層建築，資本密度較高。而在郊區由於地價較低，企業會用更多的土地投入替代相對昂貴的資本投入，使郊區資本密度較低，在空間形態上表現為低密度和低強度的城市土地利用。從另外一個角度分析，隻有提高了郊區建成區投資資本密度，纔有可能提高建成區開發強度和土地產出率等指標，並同時提高單位土地銷售額、單位土地利潤、單位土地稅收、單位土地出口額、單位土地工業增加值等指標。

### 5.2.3 城市土地利用結構合理

城市土地利用結構是指各類用地占總用地的比重，各類用地總量之和構成城市土地利用總量，因此，大都市郊區化進程中合理的城市土地利用結構是城市土地利用控制中重要的組成部分。與城市土地利用結構密切相關的因素主要是大都市的經濟社會發展目標，產業結構的選擇，各類產業用地的資本和就業密度，各類用地的開發強度以及提供的建築總量等等。在大都市城市土地利用結構分析中，四大類用地是主要的分析對象，在工業、居住、道路廣場和綠地四大類用地中，工業用地和居住用地的比重又是最重要的指標。大都市城市土地利用結構的分析不能僅僅局限於中心城區的範圍，應該在全市市域範圍內進行市土地利用結構的分析，在此基礎上在進行中心城區、核心城區、邊緣城區等分項的土地利用

<sup>53</sup> [美]丁成日.中國城市的人口密度高嗎?城市規劃,2004[8].p43

結構分析，這樣我們纔能從整體上把握大都市城市土地利用結構的特點。

#### 5.2.4 城市土地開發強度適中

##### 1、大都市城市土地開發強度的控制策略

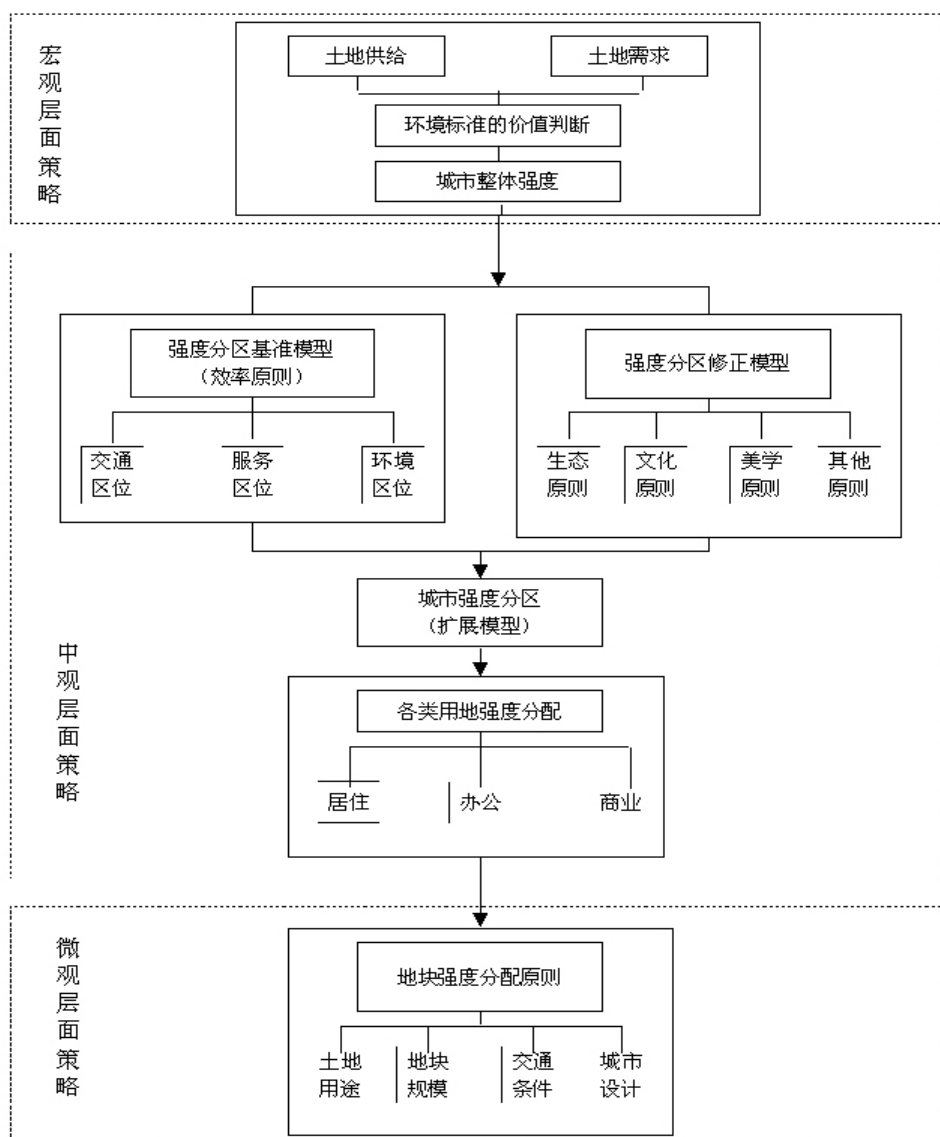


圖 7：城市土地開發強度控制策略的方法體繫框圖

資料來源：上海市城市規劃設計研究院，上海市中心城強度分區研究，2004。

(1) 宏觀層面：將大都市按照中心城、近郊區和遠郊區進行區域劃分，綜合確定三個區域範圍內的城市土地供給總量以及城市發展邊界，參照國際經驗和城市發展需求進行類比分析，根據三個區域的城市常住人口的居住建築模式、公共設施模式、工業區就業模式和環境標準導向預測確定住宅建築總量、辦公建築總量、商業建築總量、工業建築總量的大致範圍，確定大都市整體開發強度和三個區域各自的整體開發強度。在這個過程中可能會對三個區域某一類用地進行平均容積率的比較分析評估，主要從城市空間環境的塑造、市民居住工作生活環境的優劣角度進行價值觀層面的論證，最後確定一個合理的平均容積率指標並推算出某一類建築的總建築面積。上海市在完成的中心城強度分區研究中通過對居住用地開發強度的比較，將中心城居住用地開發強度分為高、中、適宜三種開發模式，其中高強度開發居住用地平均容積率 2.5，中心城可居住 1000 萬人，而中強度和適宜強度開發

的居住用地平均容積率分別為 2.0 和 1.5，中心城分別居住人口為 940 萬和 850 萬，經過分析論證，最終確定居住用地適宜容積率 1.5 作為規劃控制的依據。

(2) 中觀層面：在大都市以及三個區域整體開發總量確定以後，需要進一步在三個區域的基礎上進行每個地塊的強度分區，包括建立強度分區的基準模型、修正模型和擴展模型，進行居住、商業辦公用地的強度分配。

(3) 微觀層面上：以街區作為容量控制單元，制定地塊強度細分的原則。微觀層面上的地塊強度分配是對於中觀層面上的城市強度分區的精細化，而不應當導致建築總量的明顯突破。借鑒發達國家牙口地區的經驗，地塊強度分配應當考慮土地用途、地塊規模、交通條件和城市設計等方面的影響。

## 6 控制對策三：保障制度完善

### 6.1 市場失靈的控制

#### 6.1.1 降低外部不經濟性

解決外部不經濟性的基本原則是外部性內部化，即使受益的土地產權人和使用者分攤必要的外部成本，使受害的土地產權人和使用者得到合理的補償。具體措施包括產權界定、土地產權交易、損害賠償制度、稅費制度、環境管制、規劃控制等。而政府在進行管制時是通過對城市土地利用主體的經濟行為進行限制、懲罰、獎勵和誘導，從而影響他們的土地利用決策行為，達到提高土地資源配置效率的目的。但是政府實施管制必須滿足二個條件：第一，政府管制的效果必須好於市場機制的效果，第二，政府管制的收益必須大於政府本身干預的成本<sup>54</sup>。

#### 1、稅費制度

這一制度是指對外部經濟性制造者給予補償或補貼，對外部不經濟性的制造者征收等於社會邊際損害的稅，其理論來源是庇古認為政府通過徵稅來矯正經濟當事人的私人成本，促使私人成本與社會成本趨於一致，所以又稱庇古稅。

2、規劃和環境管制：規劃管制是指通過規劃編制和管理對城市土地的數量、區位和性質進行配置和管理，以達到城市土地利用符合城市發展目標，土地集約花利用。環境管制是建立在環境質量標準基礎上，是政府以非市場途徑對環境資源利用的直接干預，表現為禁令、行政許可制、強制規定等。

#### 6.1.2 消除壟斷

壟斷造成的市場失靈，針對地產市場而言，土地的有限性必然造成土地供給上的一定程度的壟斷。特別當地價上漲過快時，人們往往把土地當成保值和增值的手段，從而影響土地的高效配置和合理利用。在加強宏觀調控以前，我國城市尤其是各類開發區中出現的瘋狂的土地投機現象也說明，由於壟斷的存在，僅靠市場機制難以實現土地資源的高效率配置，政府必須採取征收土地增值稅等措施抑制土地壟斷造成的投機行為。

### 6.2 非市場失靈的控制

#### 6.2.1 利益主體從博弈走向多贏

##### 1、中央政府和地方政府

從我國土地資源的特殊的重要性、稀缺性、公共產品屬性和可持續性利用的需要來看，我國城市土地國有具有明顯的優越性，能最大程度的體現了社會公平和公共利益。因此，中央政府必須牢牢控制城市土地利用的增量，保證國家的建設、糧食和生態環境安全，但是中央政府和地方政府博弈所產生的負面影響也必須逐步調整。

##### (1) 調整中央政府和地方政府的事權和財權

中央政府和地方政府的灰色博弈均衡導致土地資源配置效率損失，必須對此做出的權衡。

<sup>54</sup>孫鈺，等.城市空間經濟學.經濟科學出版社，2002.p165-183

將中央和地方政府的事權和財權劃分進行平衡，現在的狀況是中央財權較大，占六成以上，而事權占四成，地方政府財權四成、事權六成。中央宏觀調控無疑是正確的，但“分稅制”一定程度上影響了地方可支配收入的增長；不斷增長的地方政府提供公共服務的需求，要求政府有充足的財政收入<sup>55</sup>。所以需要合理調節中央和地方的分配比例，嚴格土地出讓金管理。一是適當調整中央、地方財稅分配比例，增加地方政府財稅收入分配份額，以減輕地方政府的財政壓力；二是加大中央、省對市縣的轉移支付力度，以增加對“三農”、教育、科技投入，解決基層基礎設施建設薄弱、農村文化教育落後、科技投入不足的問題；三是嚴格土地出讓金的預算管理，杜絕體外循環，這應作為一條鐵的紀律納入依法監督的範疇。需要加大地方政府財權，避免因為財政收入不足而通過過度出讓土地獲得財政收入。

## （2）稅收制度改革的幾種思路

在城市財政收入中，隨著公共財政的建設和完善，稅收收入成為最大的來源。企業所得稅作為地方政府重要的稅源，是促成地方保護和宏觀經濟波動的因素，也是造成地方總有投資的衝動、進行“重復建設”的主要原因。另外，“以地生財”，成為政府收入的主要部分（達到 1/3 以上），稅收制度是造成很多經濟問題的原因。

■ 思路一：凡與土地有關的一切稅收都應劃歸國稅，納入中央預算，招斷地方政府在土地上的利益。

■ 思路二：生產型增殖稅改為消費型增殖稅--將減弱地方經濟衝動；把向企業征收的增值稅，改為在產品最終消費地，向消費者征收消費稅。稅種改革，中央仍然從中分成，收入沒有減少，隻是地方之間利益發生了變化。原來是企業越多，稅收越多，現在隻要有消費者，就會財源滾滾；各地就不會再競相去上新項目，搞重復建設，而會把精力集中在增加老百姓收入，改善市場環境上。

■ 思路三：物業稅改革--增加政府提供公共物品的動力。

國家有關部門正在研究物業稅改革的有關問題。其改革的基本框架是，將現行的房產稅、城市房地產稅、土地增值稅以及土地出讓金等稅費合並，轉化為房產保有階段統一收取的物業稅。物業稅開征以後，在政府財政尤其是地方政府財政中的比重會不斷增加。政府為了增加財政收入，政府完全有理由千方百計地改善當地環境，隻有各方面的環境變好了，人們纔會在這裡居住下去。在當地居住的人越多，物業稅就越多，個人所得稅也會增加，政府財政收入就會相應增加。如美國的企業所得稅在地方收入裡面占很小的比重，隻有 8%。美國州政府的稅源一個是財產稅，另一個是銷售稅。政府主要致力於改善環境，希望更多的人到這裡工作、消費，進而促進房地產增值。

■ 思路四：公共用地應由地方政府向中央政府納稅，因為我們的城市土地是國家所有，誰使用誰納稅，這樣就能制約地方政府用地上的大手大腳。用地者要納稅，不僅包括個人，還包括地方政府，包括政府各部門、各單位、企業等，這纔是市場經濟的體現。

## （3）要區別對待，不搞“一刀切”

一方面要根據城市發展的階段性目標制定合理的城市土地利用指標，另一方面要根據城市發展的層次性目標，針對不同的城市確定不同的耕地保護和城市土地利用指標，通過中央政府向城市征收宏觀級差地租，其中包括宏觀區位級差地租、城市規模級差地租和城市功能級差地租，以實現城市土地的國有權，形成轉移支付，調節全國各城市的經濟發展。發達地區多用地、用好地，就要拿出相應比例的財政收入使其他地區的農民獲益，對口支持農業生產，使其他地區的農民獲得直接的好處。這樣做對發達地區的工業規模進行限制，促使發展工業的資金轉移到其他地區，農業生產布局也可以得到調節。還可以合理調整我國的產業結構和布局鼓勵向空中發展，可以考慮從地價收益上對高容積率的用地者予以補貼。從保護耕地、保障我國糧食安全的角度講，要建立相關的財政轉移支付制度。發達地區占了那麼多地搞建設和搞工業，糧食、農副產品就需要從其他地區調進。工業比較效益

<sup>55</sup>判斷某個城市政府財力的一個理論化的公式：可支配財力=一般預算收入+基金收入+預算外收入+其他政府性收入+上級政府的轉移支付-上解上級政府支出。

高，農產品便宜，其他地區就發展不起來，隻能搞農業，造成區域性的收入差距加大。解決這個問題，隻能靠財政轉移支付的辦法。

#### (4) 其它的一些思考

在行政配置機制中，中央政府和地方（城市）政府進行合理的分工，中央政府和省政府主要負責宏觀範圍的國民經濟計劃和土地利用總體規劃的管理，城市政府主要負責城市規劃的管理。提高規劃的技術水平，如廣泛推行社會成本---社會效益分析技術等。使行政投入、行政成本與交易成本概念顯化，進行成本效益分析機制；建立土地基金，劃分地方各屆政府使用土地收益的規模，減少地方政府供地和投資衝動。明確土地處置權，將中央的計劃指導與審批權控制，與地方政府實際享有的控制權統一。逐步改革“統一所有、分級管理”的大一統產權機制。可考慮的一個辦法是國家隻保留憲法意義的終極所有權，將經濟意義上的完整的土地產權賦予城市政府，在此基礎上借鑒 95 港模式，通過城市政府的經營和管理最大化土地價值和來自土地的收益。如果再開放一些，可以允許城市政府向企業或個人出售土地所有權，城市政府隻負責城市規劃和稅收調節。通過征收土地財產稅和增值稅，既可以保持市場活躍，又可以防止土地市場泡沫，政府還可以實現較之政府擁有並經營土地更大的淨收益。這樣，政府隻負責計劃和土地規劃，土地（包括農用土地）在各經濟主體之間自由交易，可以實現計劃機制與市場機制有機結合，最大限度地提高城市土地利用效率。

## 7. 參考文獻

1. 北京市人民政府．《北京城市總體規劃（2004-2020）》文本．北京城市規劃信息，2005[3]
2. 北京市人民政府．北京城市總體規劃（1991-2010），1995
3. 北京市人民政府．北京城市總體規劃（2004-2020），2004
4. 北京市統計局編，北京區域統計年鑒（2003）．同心出版社，2004
5. 廣州市人民政府．《廣州市城市總體規劃（2001 年—2010 年）》說明書，2004[6]
6. 廣州市人民政府．廣州市城市總體規劃（1981-2000），1984
7. 廣州市人民政府．廣州市城市總體規劃（1996-2010），2001
8. 廣州市人民政府．廣州市城市總體規劃（2001-2010），2004
9. 廣州市統計局．廣州統計年鑒（1995、2000、2004），中國統計出版社
10. 敬東．城市規劃依法行政的體制、機制和法制研究．青年城市規劃師論文競賽獲獎論文，1999
11. 敬東．城市經濟增長與土地利用控制的相關性研究．城市規劃，2004[11]
12. 敬東．新土地管理法對城市規劃法的影響．城市規劃彙刊，1999[5]
13. 敬東．城市土地使用和房地產管理的相關性研究．國際住房與規劃聯合會（IFHP）第 46 屆世界大會 A 類論文集，2002
14. 敬東．大都市人口增長與土地利用控制的相關性研究．城市規劃面對面-2005 城市規劃年會論文集．中國水利水電出版社，2005
15. 上海城市規劃設計研究院．上海市中心城強度分區研究，2004
16. 上海市經濟委員會等上海產業用地指南（2004 版），2004
17. 上海市人民政府，上海城市近期建設規劃（2003-2007），2003
18. 上海市人民政府，上海市城市總體規劃（1983-2000），1983
19. 上海市人民政府，上海市城市總體規劃（1995-2020 年），1996
20. 上海市人民政府，上海市城市總體規劃（1999-2020），2002
21. 周一星等．北京的郊區化及其對策．科學出版社，2000
22. 中國土地學會編．21 世紀中國土地科學與經濟社會發展．中國大地出版社，2003
23. 張庭偉．控制城市用地蔓延：一個全球的問題．城市規劃，1999[8]
24. 張進．美國的城市增長管理．國外城市規劃，2002[2]
25. 吳志強等．全球化理論的實證研究--上海城市土地開發空間布局的特征．城市規劃彙刊，2000[4]
26. 吳縛龍，葉嘉安，中國城市土地開發方式的轉變與城市空間結構的重新構造．中國社



會科學學刊(95港),1996[15]

27. 唐子來,付磊.城市密度分區研究----以深圳經濟特區為例.城市規劃彙刊,2003[1]

28. 林肯土地政策研究所,美) Gerrit J. Knaap 編,國土信息中心譯.土地市場監控與城市理性發展,中國大地出版社,2003

29. 林肯土地政策研究所著,國土資源部信息中心譯.土地規劃管理----美國俄勒岡州土地利用規劃的經驗教訓.中國大地出版社,2003

## **Control of Urban Land Use in the Process of Suburbanization of Metropolises in China**

**Dong JING, Qian XIE**

*Shanghai JRL Design Institute*

### **Abstract**

This research is based on a certain period of development in China, i.e. the economy and society have been rapidly developing ever since the reform and open policy. And suburbanization, which is one of the most important stages in urbanization, has also experienced the process of sprouting, growing and rapid developing. In the fast spreading of urban space the metropolises are confronted with the problem of disorder in land use like many other foreign countries do. Since the economic and social development is in a special era of transformation, the Communist Party of China (CPC) Central Committee put forward the concept of scientific development to guide all the other developments. As the platform for the economic and social development, and the space carrier of cereal safety, ecologic safety and social harmony, urban land has been taken as the focus and hot topic of the governments and the people. The paper begins with the features of lost control of urban land use, summarizing the general features of that throughout China; the phenomenon features of that in Shanghai, Beijing and Kwangchow from the aspects of loose space structure, lost control of the total amount of land use, and unbalanced structure and inappropriate development strength; and the essential features of the unclearness of goal-setting, the inefficacy of implementation and the absence of guarantee system. Then in the light of the phenomenon and essential features and the influencing factors of the out-of-control urban land use, the paper puts forward a proposal from three aspects, that is to clarify the development goals, to make implementation efficacious, and to better the guarantee system. Respectively speaking, as for the development goal prominence is given to goal choosing in terms of phase and level during the course of sustainable development. As for making implementation effective urban development behavior emphasizes the transformation of economic increase model, population control, cereal production plan, ecological safety, and harmonious society construction; while for urban planning behavior compacting urban space structure, controlling the total amount of urban land use, making the structure and the development strength reasonable. As for the guarantee system the emphasis is put on the control and instruction of market malfunction and non-market malfunction by the improvement of system.

**Keywords:** metropolis, suburbanization, urban land use, out of control, control

## Foreigners' Land Acquisition and Urban Development of Treaty Ports in China: A Case Study on Xiamen

Yu CHEN

*Asia Research Institute, National University of Singapore*

### **Abstract**

After the Opium Wars, treaty ports were opened in China and were regarded as the precedents of modern Chinese cities. Among them, Xiamen (Amoy), Shanghai, Ningbo (Ningpo), Fuzhou (Foochow) and Guangzhou (Canton), were the first five treaty ports. With the establishment of the treaty port system, foreigners were allowed to reside and trade in China. Accordingly, the "Rent-in-perpetuity" system was created to fulfill foreigners' land acquisition, while retaining China's territorial sovereignty. Hence, foreigners could own land in the treaty ports with long-term tenures and involved in urban development of Chinese cities. However, foreigners' land rights, in particular, the land using right varied in concessions, international settlements and Chinese areas, due to different land sources and administrative systems. Consequently, land development and urban landscape in these areas differed much from each other in many aspects.

Xiamen was a treaty port with developed Chinese areas along the Inner Harbour, and the British Concession initiated in 1852, as well as Gulangyu International Settlement founded in 1902. Through investigating the British land acquisition in three urban settlements in Xiamen, this paper aims to present what factors affected foreigners' land acquisition and development in the treaty ports. It will shed light on the relationship between foreigners' land rights and their influence on urban development of modern Chinese cities in the Semi-colonial era.

As the British Concession was leased to the British Government by the local Chinese authorities, it could be planned as a whole and turned into the Amoy Bund despite the lots were subleased to their nationals and others. On the contrary, Gulangyu International Settlement largely retained its original urban structure even after the Municipal Council came to operation in 1903, because the Chinese Government continued to control the land and Sino-foreign land transactions directly happened between the locals and foreigners. In the Chinese areas, foreigners obtained land in the similar way as the Chinese did. And their land development was not affected by the Western regulations set up in concessions and international settlements. Hence, their properties integrated with the Chinese neighborhoods easily.

This historical study will contribute to our understanding of socio-cultural meanings of urban built environment shaped in Semi-colonial China and their effects on urban development of contemporary China in the process of globalization and modernization.

## **Spatial Restructuring in Urban China amid Globalization: The Case of Guangzhou in Comparative Perspective**

**Lachang LU<sup>1</sup>, Linda McCARTHY<sup>2</sup>**

*1. Guangzhou University, Guangzhou, P. R. China*

*2. University of Wisconsin-Milwaukee, USA*

### **Abstract**

Globalization and more flexible production systems have contributed to urban restructuring around the world. Yet research on Chinese and other post-socialist cities categorizes them as a separate “transitional” group. Certainly, negative reaction to the “convergence thesis” may have contributed to a tendency to identify Chinese cities as distinct. Yet despite the importance of local context in mediating global forces, the increasing pervasiveness of globalization processes means that a comparative international perspective may be helpful. Having established our theoretical framework for understanding urban spatial change in China, we introduce a three-stage model based on the real world example of Guangzhou. This allows us to distinguish not only distinctive features of Chinese urban processes and spatial change, but also any emerging similarities between Chinese cities like Guangzhou and U.S. cities. Some theoretical and policy implications are then discussed including whether U.S. experience with shared problems like urban sprawl and environmental degradation can help inform Chinese policy.

## The City, Urbanisation and Modernity in China<sup>56</sup>

Ian Morley

Department of History, Chinese University of Hong Kong,  
Shatin NT, Hong Kong SAR  
Telephone: +852-2609-7116  
FAX: +852-2603-5685  
Email: [ianmorley@arts.cuhk.edu.hk](mailto:ianmorley@arts.cuhk.edu.hk)

### Abstract

Urbanisation has historically shown itself to both be an effect and also a cause of societal changes initially instigated by the onset of industrialisation. So closely allied is urban growth with industrialisation, and so significant are they in terms of how a society perceives itself, that they collectively in effect act as an age marker, that is they are culturally defining processes that mark a society's advancement from the traditional to the modern. In such a light therefore urbanisation is integral to the acuity a society has of itself and its influence can be reinforced through moral imperatives and political strategies so as to, for instance, deal with age old problems connected to impoverished rural locales. In this proposal an analysis of the urban perspective of China's contemporary development is given, a means to appraise not only China's shifting state-society relationship commonly known as China's 'opening up' but to moreover appreciate how the evolving economic and political approach in China has manifest a process that has been radically altering the urban landscape in terms of scale, density and complexity. Focusing upon issues such as the clearing and redeveloping of city districts and the construction of skyscrapers, the work shall demonstrate how urbanisation has been explicitly encouraged to radiate the benefits of modernity. To sum up, the proposal will explicate the redefining of city in 'abstract' and its significance for the unfolding of future society as China moves away from its traditional, i.e. agrarian, foundation.

### 1. Background

For almost thirty years China has been experiencing major transition as a consequence of the adoption of an economic paradigm commonly referred to in the West as 'opening-up', that is a modernizing process founded on national economic restructuring from a Soviet styled command economy to a market economy with Chinese characteristics (Broudehoux, 2004: 8-10), and the reorganizing of goods and services through local regional, national, and international markets. In accord with this economic alteration, and the introduction of land and housing reforms, the momentum for urban growth has expanded, and the morphology and appearance of China's urban places has changed. Large numbers of towns and cities have, for instance, grown in terms of their complexity, demographic size and spatial extent,

---

<sup>56</sup> This paper is based on the paper "Abstracting the City: Urbanization and the 'Opening-up' Process in China, to be include within Jennifer Hsu and Reza Hasmath's *China in an Era of Transition* (to be published in 2008-9).

with the 295 settlements listed in the *Chinese Statistical Yearbook for Cities* (1985 and 2005) having a built-up area of 8,842 square kilometres in 1984 having expanded to almost 24,000 square kilometres by 2004. Hitherto rural environments previously distant from the urban fringe have thus been swallowed by the expanding sprawl of urban communities. The vertical nature of Chinese cities has likewise been transformed. Old low-rise buildings have been replaced by edifices of a greater vertical scale as a result of the need for office buildings, the necessity to increase housing stock so as to ease the problem of housing shortages (Wu in Logan, 2002: 155), and the rising cost of urban land. Yet of note as well is the actuality that Chinese settlements have undergone alterations broader than just their appearance as more than 180 urban settlements in China now perceive themselves as being 'internationalized'. Consequently the meaning of contemporary China's cities contrasts with previous times.

During the past few decades much scholarly attention has been placed upon China and its evolving economic, political, and urban contexts. Given the nature of this work there is little need to provide detailed comment upon circumstances and events widely written about before. Nevertheless a few basic comments are pertinent. By way of illustration, China's 'opening-up' has allowed the national economy to enlarge by 10% or more per annum since the late-1970s. The expansion of China's economy, now one of the largest in the world, has helped increase the country's levels of national income and peoples' disposable income, which despite being comparatively low by world standards is rapidly rising. Indeed the expansion of China's economy in the past few decades has meant that the average Chinese citizen is wealthier than they have ever been in their country's history with, for example, per capita income in Beijing now exceeding US\$6,000 each year (China News, April 3 2007) and in Shanghai over US\$7,000 per annum (People's Daily, February 8 2007). Yet, as profitable as the use of economic determinism to national progress has been it has also led to the onset of numerous urban-based predicaments (Atkinson, 2007: 31).

Although many of the problems evident in contemporary Chinese urban places shall be raised and subsequently explained some need to be commented upon immediately. As a case in point, one of the most easily recognizable present-day predicaments occurring in China's cities has been the municipal approved destruction of a large number of historic urban districts. Consequently many homes have been destroyed and architectural artifacts of note, including the renowned *siheyuan* houses and *hutong* quarters of Beijing, and *li-long* blocks of Shanghai, have been torn down because they are old (See People's Daily Online), and do not match the modern urban image Chinese elites are manufacturing. Of note too, frequently in the place of razed structures are erected standardized concrete-built edifices of unoriginal and repetitive design. Hence China's urban transformation may be said, amongst other things, to be occurring at the detriment of a built environment of local and national culture and identity (Chang, 1990: 73). Not only has cultural heritage thus come under serious threat but the matter of replacing the old city with a 'new city' based on modern design and spatial arrangements in accord with contemporary urban planning principles has led to a divergence in urban spatial patterns, the appearance of new abstract urban design values, and an urban vision where new ideals are exercised through the implementation of monumental scales of high-tech industrial zones at the urban fringe (Gaubatz in Davis et al, 1995: 45), skyscraper office buildings at the urban core, and high-rise apartment blocks or luxury villas for the wealthy.

## **2. Cities, the Opening-Up Process, and its Impacts**

When examining the modern urban history of China it is imperative to appreciate the intertwining matters of economic development, political ideology, demography and culture, and the influence they have had upon urbanization. Moreover it is also imperative to grasp China's profundity of empiricism, and the experience of grave social problems throughout the nation's history, e.g. famines, natural disasters, poor housing and rural poverty - matters labelled as the struggles of the peasantry (Boyd, 1962: 21). Accordingly to under-estimate the legacy of social matters upon the Chinese psyche would be reckless, for even up to the 1960s famines were a genuine threat to the nation's stability. Hence Yeh and Xu's remark (1989: 4) that governmental attitudes and policies regulating urban growth in the densely populated eastern provinces during the last century were pragmatic enterprises in population control given the experiences, predicaments and lessons of China's past. Moreover this management situation was further shaped by the moral perceptions of the elites, who between the late-1940s and 1970s associated urbanization with free economic enterprise, immorality, social pollution and the avant-garde (Au and Henderson, 2004), i.e. decadent Western values. Yet despite the elites holding an iron collar around urban growth it would be erroneous to label Chinese authorities as being intrinsically anti-urban. Indeed it would be more accurate to note how the elites adopted acuity to urbanization which respected both the advantages and disadvantages of urban growth given their nation's circumstances and history, and evidence for such a statement may be derived from Mao Zedong's broad political and cultural dialectical view of 'walking on two legs' (Sit in Sit, 1985: 10). Nonetheless in December 1978 a turning point was reached when the 11<sup>th</sup> National Congress of the Communist Party of China (CPC) under the leadership of Deng Xiaoping adopted a decree to instigate economic development so as to achieve 'Four Modernizations' (agriculture, industry, science and technology, and national defence). Since this time urbanization has been integral to rejuvenating China's economy (Kwok in Guldin, 1992: 72) and its accumulation of capital. Under such a framework cities have, in effect, been given formal sanction to guide the national modernization process (Cook in Wu, 2006: 63).

In the open policy era, that is the time following on from the CPC's 1978 economic advancement decree, the ensuing policy of employing city growth to promote national advancement should be recognized as being a stratagem utilized to both propel China forward, and concurrently resolve age-old social problems. In this milieu the coupling of economic growth with urban growth may be recognized as being a moral imperative, and under such a context large cities and their development have acquired a number of complex meanings. To highlight this point China's largest cities, such as Beijing, Shanghai, Guangzhou and Tianjin, are now "expected to serve as growth centres for the countryside through externalities and spill-over effects" (Batisse, Brun and Renard in Wu, 2006: 49), and in Guangdong Province this was encouraged further by the creation of 'Industrial Satellite Towns' (Woo in Yeung and Chu, 1998: 363). As such cities at the top of the urban hierarchy are motors for regional progress, and they are the sites to actualize the replacement of archaic environments and problems through the construction of new surroundings of vastly different imagery and meaning. In other words large cities are the nucleus of the procedure to literally raze 'old China' and its associated problems, and means by which this is achieved is

through urban renewal, suburban expansion and state policy to encourage township industry.



Figure 1. This urban scene reveals the monumentality of modern Chinese urbanism with its scale, appearance and form dissimilar to that of traditional Chinese urban development.

### **3. Out with the Old, and Globalizing the New**

Earlier in this work it was noted how Chinese urban development is closely allied to economic and political contexts, and that a number of transformations regarding urban scale, complexity, and heterogeneity have become apparent after 1978's modernization diktat. In this section consideration is given to the endeavour of bestowing an abstract vision of social transformation, advancement and modernity through the remodelling of Chinese cities. A few generic observations are thus relevant to begin with.

Cities, irrespective of their pasts, locations and natures are complex entities. They are subject to a plethora of influences that can affect their nature, size and urban form. They are also sites of political and economic expression, these being markers of a nation's cultural position at a given point in time (Sit in Sit, 1995: 29). As already touched upon, economic advancement and urban transition in China has been propelled by globalization. Yet in spite of Chinese governments at the national and local level utilizing worldwide economic forces to propel the nation forward Broudehoux (2004) has revealed that the impact of exogenous economic factors has led not only to new insights about cities, economic expansion and modernity, but new forms of inequality and spatial segregation too (Broudehoux, 2004: 6). One such predicament stems from the state-approved process of razing and rebuilding neighbourhoods, the outcome of which has permitted the displacement of many poorer members of urban society yet concurrently permitted the elites "to isolate themselves behind the barrier of real estate pricing. Through their economic control of space, entrepreneurs and property investors have the power to determine who will dominate, use, live in and profit" (Lü, Rowe and Zhang, 2001: 276). Significantly too, this process of transforming urban land and establishing a new housing market has led

to the commoditizing of urban space, a reflection of the broad commodity culture that has emerged in open-era China. Furthermore, given the milieu to internationalize Chinese cities an extensive process to further expand cultural activity through civic consumption has begun. Thus with the construction of high-class residential enclaves for the emerging middle classes, many using pseudo-European design through “adopting the colours, column order, artificial moulding and roofs of Western classic architecture” (Lü et al, 2001: 276), has also surfaced the redevelopment of urban cores with building types such as art galleries, museums, shopping malls, hotels, restaurants, etc.

The cultural development of cities has, in some instances, been considered essential by the local elites in order to elevate the perceived unsophisticated nature of urban places. Guangzhou, the capital city of Guangdong Province, for example, in light of its reputation for money-making, industry and a lack of urbanity has been ‘uplifted’ by the policies of public authorities since the 1990s. Not only have massive offices and housing complexes been built, e.g. the 1283 feet-high CITIC Plaza (figure 2), 597 feet-tall Metro Plaza and 466 feet-high Sky Central Plaza Apartments, but also a number of major public edifices that include the Guangzhou Opera House, Guangzhou Library, Children’s Palace, and Guangdong Museum have been erected, so as to boost the city’s cultural ambiance and status. In this way Guangzhou’s government may be perceived as endeavouring to fill a perceived contemporary void based on the need for first-class civil facilities so that the city can proudly define itself as a modern, internationally renowned settlement. Yet, to reiterate for a moment, the way in which culture has been imposed upon urban society through the proposing and construction of cultural institutions goes hand-in-hand with how the modern Chinese city has been conceived as an object strongly connected to consumerism (Schein in Chen, Clark, Gottschang and Jeffrey, 2001: 255). In such a milieu the amount of culture evident in cities thereby visibly indicates its and its citizens’ sense of modernity and their affluence, and therefore the local standard of living too. Accordingly the more culture the city has to be consumed by its citizens, the wealthier the city can reveal itself to be, and the more it can reveal itself to be non-parochial in both form and nature. Moreover, as wealth has long been an ideal in Chinese culture (Chen in Chen et al. 2001: 166) the cultural significance of providing new amenities that are collectively countable and characterized by their scale and modern design styles as observable gauges of prosperity, should not be underestimated.



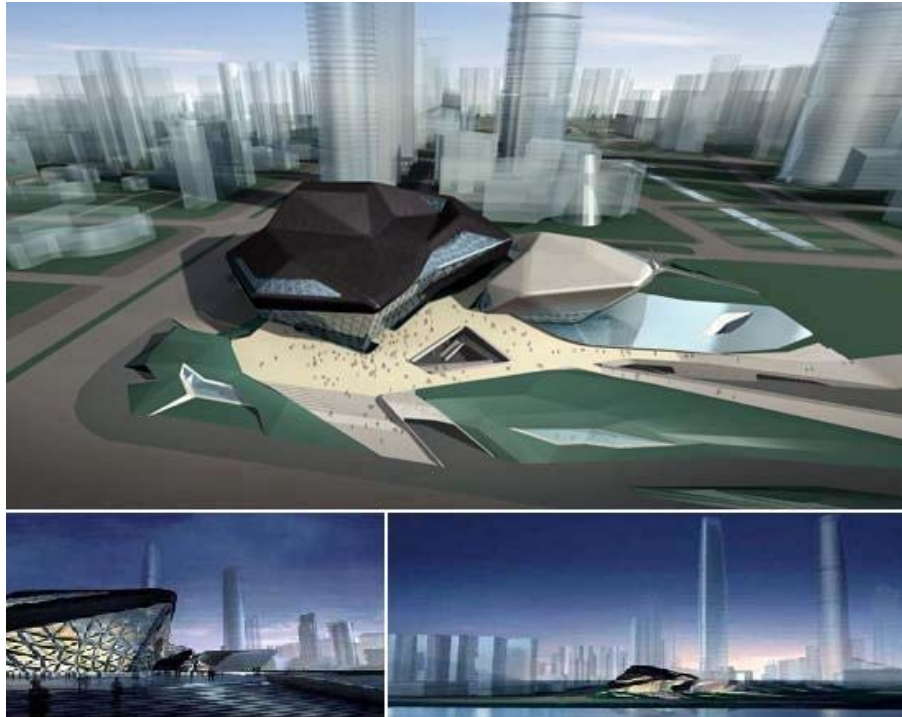


Figure 2. The Opera House, Guangzhou by Zaha Hadid

#### 4. International Icons and Reflections

It is difficult to think about China and its cities without certain age-old images immediately coming to mind, e.g. the Forbidden City in Beijing, the terracotta warriors in Xi'an or the historic architecture of the Bund, Shanghai. However, many of China's icons are also contemporary in nature, like the new Beijing National Stadium (to be opened in 2008), and the impressive skyline of Shanghai's urban core. To discuss Shanghai, albeit briefly, its buildings have long been the international symbol of the city, which as mentioned before have for most of the last century been based on the appearance of the Bund, although during the 1980s and 1990s the city, along with other places, e.g. Beijing and Guangzhou, has engaged in altering its images to a new economically defined vision based on skyscrapers and cultural facilities. To a great degree the modern-day image of Chinese cities has been very carefully managed as Broudehoux (2004) has eloquently documented. Taking Beijing as a case in point the selling of this city was borne out of the 'One World, One Dream' scheme (Broudehoux, 2004: 150-60), a lofty agenda with the 2008 Olympics at its core that has promoted the city as the capital of a modern nation, a city of the world, and a place to share the global community and its culture (China Daily, June 27 2005). For Shanghai its image has been based upon the radical transformation of one of its boroughs and creating the Lujiazui Financial District, a glittering new Central Business District (CBD) whose built environment presents a vision of corporate and cultural might comparable to Asia's original world city, Hong Kong, i.e. Asia's key node in the networked global economy and internationalization of capital production (Yusuf and Wu, 2001).



Figure 3. Top: The Pudong, Shanghai, and (bottom) the Central District, Hong Kong

In creating modern, large-sized cities in China certain tools have been employed to display the nation's path to economic determinism and progress. During the 1980s SEZs and the rank of 'Open Coastal Cities' were created, and by the 1990s, for instance, a device employed to accentuate the advancing economic substance of Chinese cities was Economic and Technological Development Zones (DZ), often located in central areas within which high-rise office buildings can be erected, in so doing giving the superficial impression that Chinese settlements are 'becoming' Hong Kong in terms of their economy and appearance (Yang in Wu, 2006: 136). One such place that has taken on the characteristics of Hong Kong, at least in the visual sense, is Shenzhen, a place described by the mid-1980s as being among the most dynamic and modern-looking cities in all of China (Chen, 1987: 57).



Figure 4. Top: Looking east along Shennan Avenue in Shenzhen, and (bottom) looking west along the same thoroughfare

Located in Guangdong Province at the border with Hong Kong, Shenzhen prior to the granting of SEZ status in 1979 consisted of numerous agricultural and fishing communities. From having a population of about 30,000 people at that time Shenzhen has exploded into a cosmopolitan boomtown with an official population of over 8.25 million residents by 2005. Being the world's fastest growing city in the past 25 or so years, and now covering more than 2000 kms<sup>2</sup> in area, Shenzhen is an ideal place to witness the unfolding of modern Chinese urbanism, and to observe the meaning of the modern, international city in China.

Described by Shen (1999) as being China's gateway to the modern world, the rapid growth of Shenzhen is an outcome of massive business investment, a rapidly expanding industrial platform, and huge sways of in-migration due to the city's appealing image based on its prosperity, SEZ status, and high quality living environment. From having just one construction company in 1979 the demographic explosion of Shenzhen was apparent from as early as the mid-1980s when the number of workers engaged in the construction of factories, offices, public edifices and houses exceeded 100,000 (Shenzhen Statistical Yearbook, 1985). In environmental terms Shenzhen, the self-proclaimed 'City of Sunshine and Modernity' (Shenzhen Municipal Government Website), the community with the highest quality of life in

China (China Daily, September 21 2006), currently offers little resemblance to what it was less than thirty years ago. The city of today has a vertical nature that towers above the village forms that Shenzhen once was, and its city-wide plan now containing large axial lines consisting of broad boulevards lined by buildings in excess of fifty floor levels. Acting somewhat as a idealized environment for China's transformation and national development Shenzhen explicitly speaks the values in abstract and pragmatic terms of China's modernization, and although the elites in the city, like elsewhere in the country, make reference in their policies and actions to shared modern values these ideals are repeatedly the bases upon which local critiques are founded, as shall now be explained.

### **5. Actors, Standards and Critiques**

When attempting to grasp notions regarding the values of modernity and urbanity in China a number of points need grasping. Therefore within this section attention is given to the contemporary urban meanings that have emerged in China as it has undergone social and economic transition. In explaining these matters consideration is put upon anthropological matters like the theory of value in so as to demonstrate the fundamental meanings of city development within the context of China's process of social advancement.

In broad terms, when any society engages in social and economic development new spatial forms are produced. These new spatial expressions have in the milieu of this work been shown to include the emergence development zones, skyscrapers, and cultural facilities. This is not to say though that other spatial expressions have not been formed, because gated communities, grand hotels, luxurious restaurants and large-sized shopping malls are also common sights within Chinese cities. Although Wu and Ma (2005: 268) have suggested that these urban elements may be examined individually they contend that it best to view them collectively when attempting to understand the changing meaning of Chinese settlements. In view of this observation a broad outlook is now adopted, and with regards to the role of the elites a number of points may be raised:

- The value of the modern metropolis has become especially meaningful to Chinese leaders as it differentiates the contemporary city, and so open-era society, from environments and the social problems of prior ages.
- The impression of modernity is architecturally expressible, and is articulated by the presence of certain design styles and scales.
- The value of the modern urban settlement is expressed through specific tokens by which it may be ranked. These include the size of its population, its number of cultural institutions, the vertical scale of the cityscape, the height of the tallest skyscraper, the number of tall buildings (i.e. over 100 metres in height), and the magnitude of the road and transport infrastructure, for instance. As Graeber (2001: 75-6) has outlined this is of a great weight in constructing civility as the application of abstract notions such as presence and ranking are the means through which values e.g. of social progress, can be realized. Along these lines certain building types, architectural forms, vertical scales, etc., bring conceptual values into being and make them culturally perceptible to both local and national society. This is very

important to the agenda of the elites who wish to put forth shared values about social betterment.

- Certain building types, road infrastructures, architectural forms, and the like are not only means by which conceptual values and ranks are brought into being but are ends in themselves. Elaborating the work of anthropologist Terence Turner, Graeber (2001: 76) asserts that tokens of rank are both tools through which values are mediated and are the manifestation of values in themselves. With reference to the urban environment therefore this premise allows the city to become a symbol *and* a setting of values, a setting where modern life and social progress can be qualitatively defined. In reality though it is also the platform on which critiques are founded as economic advancement has not brought a growth in wellbeing for all citizens.

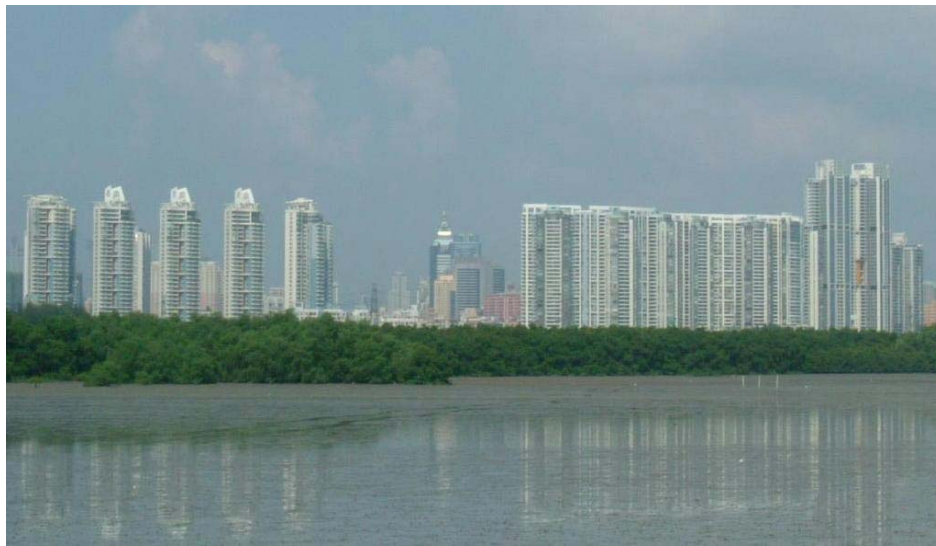
With regards to the issue of abstracting the modern Chinese city and its values certain items just mentioned need further elaborating. The first point of significance with regards to the ranking of Chinese cities is the fact that their standing is indexed through the production of visual concepts easily observable to the on-looking eye. This should not be undervalued for anyone in China can thus easily grasp certain connotations from the design and plan of the contemporary environment, and be aware of contrasts between it and the old. To adopt a Lefebvrian perspective for a moment, the implications of this visual reading of the urban setting is enormously influential for the elites. Firstly, it rather obviously confers edifying values through the language of sight irrespective of people's age, class, wealth, or life experiences. Secondly, as noted earlier, it grants a sense of time, a sense of now and a sense of differentiation between the antiquated and the present-age. Additionally, the evolution of the urban situ makes people conscious of society's growth, for as long as anyone can see urban buildings of a height and design different from Chinese architectural traditions they can grasp to some degree the progressiveness of society. Also, in such a context, the modernity and advancement of other societies, what was the once imaginary to the average Chinese citizen, becomes real, and so what was once otherworldly now becomes socially beneficial given the sense of national empiricism. As philosopher Henri Lefebvre has contended the outpouring of energy into making the once imaginary real is a defining aspect of the concept of a 'living body' (an evolving society) and its association with itself, the surroundings in which it is set and the world at large (1991: 179). Likewise insists Lefebvre the expenditure of energy into transforming a society can be deemed productive as "long as some transition, no matter how small, is thereby effected in the world" (1991: 179), which in the evolving Chinese urban context means energy can be judged useful when the skyline alters and, for instance, it replicates the wealth and supposed rise in life quality.

As much as urban transformation can help put forth modern cultural values similarly double meanings of urban and social development can occur. In other words as much as the elites intend to speak of shared values due to, for instance, the lack of arbitration in the economic hegemony of land, the unequal distribution of national wealth, and augmenting social and economic division criticisms of national progress arise. With regards to the aforesaid issue of razing old districts while it ultimately creates new standards of housing far superior to that beforehand, it similarly must be appreciated for establishing social and spatial division, as resultant gated communities on cleared land establish feelings of separation for those who have been displaced from where they once resided due to not being able to afford modern housing at the

market price. Consequently those relocated may be said to experience the costs of modernism/social progress, for their displacement and movement to unfamiliar communities diminishes their access to centrally-located urban resources but additionally because of their lack of wealth and inability to compete in the land/housing market, feelings of difference, a lack of well-being and inattentiveness to contemporary political thinking become produced. In this light the new scales and proportions created by clearing land provoke the manufacture of alternative identities as an expression of contemporary urban citizenship. In this manner the actions of demolishing and rebuilding even though designed to speak common values of betterment and progress in due course fabricate varying interpretations as to what benefits are being created by the new direction society is heading towards. As such, the actions of razing and reconstructing have different meanings to different urban actors. As a final point, the noticeable growth of settlements and their spatial and architectural transitions, allows not only for the abovementioned observation of cities and society to be made but it moreover allows for hierarchical observation as Lefebvre (1991) labels it from which rivalry surfaces between cities, their governments and elite social groups. Within this background those of influence encourage the erection of more large-sized offices, high-rise housing estates, modern architectural forms for public buildings, and more comprehensive road systems and transport infrastructures to be laid down so as to demonstrate the high ranking of their community within the region and nation. In such a situation lengthy roadways reminiscent of Parisian boulevards, roadways junctions of three or more spatial levels, new and lengthy city bridges (Gaubatz in Ma and Wu, 2005: 99), and skyscrapers of ever-increasing height become lauded by city officials as defining the contemporary nature of the settlement even if in more pragmatic terms they are also imperative to promoting regional development (Fingerhuth and Joose, 2002: 99). Hence in cities like Kunming, Yunnan Province the laying out of roadways up to 30 kms in length have been utilized to explicitly demonstrate regional capital status and be an alternative to unplanned peripheral sprawl, in so doing establishing provincial economic development axes (Fingerhuth and Joos, 2002: 98-9) in order to co-ordinate advancement between the city and its hinterland.

The materially realized nature of Chinese society, a consequence of the application of economic determinism to social progress, have led to a number of visual and urban morphological alterations during the past thirty or so years, of which some have been described. These changes, such as the increased vertical scale of cities, may be said to be what Graeber terms 'medias of value' (2001: 75), i.e. means to bring abstract notions and modern values into being. While many of the urban transformations, and their meaning, have been discussed before some matters nonetheless require further explanation. By way of example, while the modern Chinese urban environment might appear to contrast what it once was a degree of symmetry between the contemporary and the past are evident in many settlements. This is due to many new environments, particularly residential areas, retaining old village gates and replicating existing urban features, e.g. old gardens in Suzhou, Jiangsu Province, or having their planning lines guided by the foundations of the former locale. Put simply, new settings are sometimes constructed directly upon the foundations of the old communities but as modern edifices have more floor levels than traditional buildings as a result ill-lit and damp environments are created. Significantly too the new surroundings are characterized by design homogeneity and an overall lack of aesthetic charm, in so doing they present a standardized face that offers no indication of local heritage,

traditional culture or geographical individuality, and instead offers a dreary impression of modern urbanization.



**Figure 5. The skyline of Shenzhen explicitly demonstrates the modern trend of high-rise, high density living in China. The standardized form of the architecture reveals little evidence of local cultural idiosyncrasies and urban history**

In contrast to the production of gloomy environments the evolution of Chinese urban society has led to radical new expressions. Whereas it has just been mentioned that planning lines in many instances have been guided by building patterns existing prior to the razing of sites many brownfield redevelopment plans have utilized the opportunity to build new living arrangements. These can include housing units many times larger than typical living arrangement in the mid-1970s (Perkins, 2006: 4), great attention being given to the exterior design in order to provoke notions of exclusivity within the household consumption market, the consolidating the high-rise housing tradition that has emerged in recent decades, and constructing car parking areas, e.g. underneath garden terraces. Moreover through building high, embracing Western design and building techniques, and erecting large units of accommodation, China's has been able to meet the enormous demands of the commoditized housing market yet this has come about, as already touched upon, at the cost of displacing those in older housing and magnifying existing housing inequality (Huang in Ma and Wu, 2005: 194). However, as significant as these transformations and problems are one other new urban phenomenon that has arisen relates to micro-morphologies within new housing communities. Not only has urban space become fragmented because of the rise of gated neighbourhoods, many often with non-Chinese names such as 'Plaza' although in Songjiang near Shanghai communities are based on European and American models, e.g. the English community with is called Thames Town, but even inside such communities distinct social-spatial structures have arose as the wealthy yearn to express their wealth and status as part of a constructed syntax of living in grand villas or high from the ground. In such a scene where the cost of housing is based on the which floor a family resides on, and the cost rises with floor levels, thus the higher the floor level a person resides the wealthier the resident appears to be. In other words the floor level, or estate name, where someone lives is an expression of individual status. Consequently an amelioration of tensions results as those with wealth assertively act to acquire upper floor levels and villas in posh enclaves so as to

present a particular face to urban society. In many respects therefore space and its production in China amongst the elites have become materialistic, and as Lefebvre (1991: 172) rationally argues in such a context it, and so people, will naturally be perceived with implications of difference.

## **6. Conclusion**

An overview has been offered with regards to the changing face of cities in China, the evolving social and economic contexts since 1978 and their impact upon the abstract meaning of urban communities. As has been demonstrated, the Chinese quest for societal advancement has focused upon moving from one economic sphere to another, and following on from 1978 a plethora of local, national and global factors, many of which have been raised in this work, have been influential in transforming the cityscape and its meaning. Of much significance, for instance, has been the local and central political legitimacy given to globalization as a means to solve age-old problems: “The restructuring of the Chinese city is a local process that exploits and constitutes ‘global’ processes.” (Wu and Ma in Ma and Wu, 2005: 276) The development of China’s cities in the open-era, as reflected in their evolving structure and meaning thus must be appreciated for providing a map that charts of the nation’s economic emergence in the late-twentieth century, and a means to gauge to economic, social and architectural imaginations.

As has been commented upon the transformation of the Chinese city has stemmed from a variety of complex, inter-related factors, and in a work like this one it is impossible to highlight and explain each matter in detail. But, importantly, given the context of this paper the shifting nature of Chinese society and the altering of social and spatial relationships have been shown to not be inert. With regards to the elites’ abstraction of the city the wider changes in society accordingly must be appreciated for leading to a new understanding of the city due to the potential of society created by economic transitions. In this manner this work complements the work by authors such as Gaubatz (in Ma and Wu, 2005: 98-121) who have outlined how the post-1978 move to globalized large city economies, along with shifting local-central government relations and a marketization of housing in terms of its provision and consumption, has led to an idealization of the Chinese city.

In explaining the contemporary urban situation in China socio-spatial reconfigurations have been emphasized. In morphological terms specialization of land uses, the development of comprehensive transport systems and road infrastructures, and a growing verticality of the cityscape, have been noted to be fundamental to the process of modernization and ultimately achieving global city status. The reshaping of the Chinese urban world thus reveals an unfurling vision of social and economic betterment, one in which new spatial structures help bring abstract values into being. The move therefore to spatial specialization, a high-rise environment, and a growing visual resemblance to Hong Kong, should be viewed as part of the strategy to modernize China but, as demonstrated, due to the influence of the past at the same time it also provides the means to better manage the scarcity of national resources.

## **7. References**



- Atkinson, S., 2007, A Revised Framework for the Design of Chinese Cities, *Proceedings of The Third International Conference on Urban Development and Land Policy in China* (Hangzhou: Lincoln Land Institute/Zhejiang University), p. 31.
- Au, C.C., and Henderson, V., 2004, *How Migration Restrictions Limit Agglomeration and Productivity in China* (New York: World Bank).
- Batisse, C., Brun, J-F., and Renard, M-C., 2006, Globalization and the Growth of Chinese Cities, in *Globalization and the Chinese City*, ed. Fulong Wu (London: Routledge).
- Boyd, A., 1962, *Chinese Architecture and Town Planning, 1500BC to 1911 AD* (Chicago: University of Chicago Press).
- Broudehoux, A-M, 2004, *The Making of Post-Mao Beijing* (New York: Routledge).
- Chang, C.Y., 1990, Towards a Culturally Identifiable Architecture, PhD Thesis, Virginia Polytechnic Institute and State University.
- Chen, N.N., 2001, Health, Wealth and the Good Life, in *China Urban: Ethnographies of Contemporary Culture*, ed. Nancy N. Chen, Constance Clark, Suzanne Gottschang and Lyn Jeffrey (London: Duke University Press).
- Chen, X., 1987, Magic and Myth of Migration: A Case Study of a Special Economic Zone in China, *Asia-Pacific Population Journal*, 2, (1987-8).
- China Daily*, June 27 2005, Beijing 2008 Games: One World, One Dream.
- China Daily*, September 21 2006, Southern Comfort: Shenzhen Best to Live.
- China News*, April 3 2007, GDP per capita in Beijing to reach US\$6,210.
- Chinese Statistical Yearbook for Cities, 1985* (Beijing: China Statistics Press, National Bureau of Statistics for PR China).
- Chinese Statistical Yearbook for Cities, 2005* (Beijing: China Statistics Press, National Bureau of Statistics for PR China).
- Cook, I., 2006, Beijing as an 'Internationalised Metropolis', in *Globalization and the Chinese City*, ed. Fulong Wu (London: Routledge).
- Fingerhuth, C., and Joos, E., 2002, *The Kunming Project: Urban Development in China*. (Basel: Birkhäuser).
- Gaubatz, P., 1995, Urban Transformation in Post-Mao China: Impacts of the Reform Era on China's Urban Form, in *Urban Spaces in Contemporary China: The Potential for Autonomy and Community in Post-Mao China*, ed. Deborah Davis, Richard Kraus, Barry Naughton and Elizabeth Perry (Cambridge: Cambridge University Press, 1995).
- Graeber, D., 2001, *Towards an Anthropological Theory of Value* (New York: Palgrave).
- Huang, Y., 2005, From Work-Unit Compounds to Gated Communities: Housing Inequality and Residential Segregation in Transitional Beijing", in *Restructuring the Chinese City: Changing Society, Economy and Space*, ed. Laurence Ma and Fulong Wu (London: Routledge).
- Kwok, Y-W., 1992, Urbanization under Economic Reform, in *Urbanizing China*, ed. Gregory Guldin (New York: Greenwood Press).
- Lefebvre, H., 1991, *The Production of Space* (Oxford: Blackwell, 1991).
- Lü, J., Rowe, P.G., and Zhang, K., 2001, *Modern Urban Housing in China* (London: Prestel).
- People's Daily*, February 8 2007, GDP per capita in Shanghai over US\$7,000.
- People's Daily Online*, Calls for Halt to Demolition of Hutong. ([http://english.people.com.cn/200705/15/eng20070515\\_374679.html](http://english.people.com.cn/200705/15/eng20070515_374679.html)).

- Perkins, D., 2006, *The Challenge's of China's Growth* (Washington DC: American Enterprise Institute Press).
- Schein, L., 2001, Urbanity, Cosmopolitanism, Consumption, in *China Urban: Ethnographies of Contemporary Culture*, ed. Nancy N. Chen, Constance Clark, Suzanne Gottschang and Lyn Jeffrey (London: Duke University Press).
- Shen, J., Urbanization in Southern China: The Rise of Shenzhen City, in *Problems of Megacities: Social Inequalities, Environmental Risks and Urban Governance*, ed. A.G. Aguilar and I. Escamilla (Mexico City: Universidad Nacional Autonoma de Mexico).
- Shenzhen Statistical Yearbook, 1985* (Beijing, China Statistics Press).
- Shenzhen Municipal Government website (<http://english.sz.gov.cn/>).
- Sit, V., 1985, Beijing: The Nature and Planning of a Chinese Capital City, in *Chinese Cities: The Growth of the Metropolis Since 1949*, ed. Victor Sit (Oxford: Oxford University Press).
- Woo, E., 1998, Urbanisation, in *Guangdong: A Survey of a Province Undergoing Rapid Change*, ed. Y.M. Yeung and David Chu (Hong Kong: The Chinese University Press).
- Wu, F., 2002, Real Estate Development and the Transformation of Urban Space in China's Transitional Economy, with Special Reference to Shanghai, in *The New Chinese City*, ed. John Logan (Oxford: Blackwell, 2002), 155.
- Wu, F., and Ma, L., 2005, The Chinese City in Transition: Towards Theorizing China's Urban Restructuring", in *Restructuring the Chinese City: Changing Society, Economy and Space*, ed. Laurence Ma and Fulong Wu (London: Routledge).
- Yang, C., 2006, Cross-boundary Integration of the Pearl River Delta and Hong Kong: An Emerging Global City-Region in China, in *Globalization and the Chinese City*, ed. Fulong Wu (London: Routledge).
- Anthony Gar-On Yeh and Xue-Qiang Xu, 1989, *City System Development in China, 1953-86* (Working Paper No. 41. Centre of Urban Studies and Urban Planning, Hong Kong: University of Hong Kong).
- Yusuf, S., and Wu, W., 2001, *Shanghai Rising in a Globalizing World* (Policy Research Working Paper No. 2617. New York: World Bank).

## Preliminary Research on Urban Land Supply Control Model<sup>57</sup>

Rong-feng QIAO, Jin-yun GAO, An-lu ZHANG

College of Land Management  
Huazhong Agricultural University  
Wuhan 430070, China

Tel: +862787286895  
Email: qiaorongfeng@126.com  
Gaojinyun123@126.com  
zhanganlu@mail.hzau.edu.cn

### Abstract

Based on analysing the urban land supply mechanism in our country, this paper discusses the stability and controllability of the model, and gets some related suggestions aiming at urban land supply control thereafter. Firstly, the urban land supply can be controlled by adjusting to the directly transferred land, the storing land and the redemptory land. Secondly, the key of controlling urban land scale lies in the control of suburban land expropriation. And lastly the establishment of urban land supply plan not only needs to give consideration for current impact by the earlier land supply, but also the current effects on the future land supply.

### 1.Introduction

With the reform and opening up, Chinese economy is developing rapidly and the urbanization is increasing remarkably. In 1978, the level of the urbanization in China was 17.92%, while in 2003 it soared to 40.53%. Going with the rapid urbanization, the scale of city was also keeping expanding. In 2003, the area of cities have been reached 28308 km<sup>2</sup>, which augmented 3 times than in 1978 (according to China Statistical Yearbook). For a long time, the urban land supply in our country showed that the land demand catered for its supply and its control was out of order. According to statistics, during 1986-1996, Chinese non-agricultural population increased 59.7%, while the urban construction land increased 106.8%, the urban land increase elastic coefficient was 1.79, which have already outclassed the reasonable elastic coefficient 1.12 raised by the China Academy of Urban Planning and Design (Liu Wei-dong, 2002).

Apparently researching the urban land supply mechanism will be helpful to establish reasonable urban land supply policy, and provide available references for promoting urban land high efficient utilization. Simultaneously, controlling urban land supply has been one of the most important means by which our government controls the macro-economy. Generally speaking, properly increasing the supply of the urban land first-grade market will promote the development of the real estate; on the contrary,

---

<sup>57</sup> The authors are Ph.D candidate and professor respectively with the College of Land Management, Huazhong Agricultural University. The paper is co-supported by the National Natural Science Foundation of China (No.70773047 and No .70373054) , New Century Excellent Talents Program( No.NCET-04-0738).  
Correspondance should be made to: zhanganlu@mail.hzau.edu.cn

will restrain the development. When China restrains the superheated urban real estate investment, besides adjusting the interest rate, controls strictly the transferable farmland and decreases urban land supply. Therefore, on the basis of the real condition to construct the mathematic model, to analyse the urban land supply and control mechanism, will have important reference value for controlling the urban real estate and the macro-economy as well as their stable development.

At present, the urban land supply model is still a research task waiting for discussing. How to decide synthetically the urban land supply on the aspects of the time, the scale, the amount and the position will affect the sustainable utility of the urban land resource and development of urban economy. Through constructing control model, combining stability and controllability analysis, this paper makes preliminary discussion to the urban land mechanism.

There are many researches aiming at the urban land supply. Lu Xing-hai mentioned that there are two main resources in the urban land supply in advancing urbanization, which are to increase the relative supply of the urban stocking land and the expropriation land (Lu Xing-hai, 2004). Cheng Ye mentioned in his article that the measures our government takes to control the land utility was to induct, restrict and control the land management mainly by using community measurement, such as the division of land use, the layout of the land utility, the laws, the regulations, the policy, etc.(Cheng Ye., 2001). Liu Wei-Dong draw a conclusion that the urban land supply should keep a reasonable proportion of different character using land to promote the forming of city ideal space based on the need of city development (Liu Wei-dong, 2002). Overseas, the control of the urban land supply is mainly by confirming urban boundary, establishing land exploitation permission system, designing the land supply plan, etc. which are from carrying out the city planning system. Geoffrey K.Turnbull established a mathematic model aiming at the city development fee and the confirmation of urban boundary on the urban land supply; furthermore, he has made elaborate analysis and discussion (Geoffrey K. Turnbull, 2004). However, in these researches, there are fewer discussions to the urban land self-supply mechanism.

## **2.Why should the government control the urban land supply?**

Because of the land finity, the natural land supply keeps changeless haply. Furthermore, under the current science and technology and use conditions, the area of land available tends to inchmeal reduction as a result of the natural disaster and predatory and destructive snatch. According to the economic elasticity theory, land natural supply has no elasticity. But aimed at some idiographic urban land type, its quantity of supply has elasticity by land expropriation and land consolidation. In China, land expropriation has been strictly restrained and the stocking land is too limited, so the urban land supply is uptight with a low elasticity.

From the Reform and Opening, Chinese economics has been dramatically developing at a high speed, the quantity of population of city has been more than 300 million, and the disposable income per capita increases duratively. Therefore, people strongly itch for the product of real estate. In 1998 government abrogated the welfare housing and broadened the housing credit policy, which motivated the development of the real estate. Even as the statistical data show, the investment growth rate of national real estate development is up to 32% in the first half of 2002. The high-speed development of the real estate industry caused the huge land demand. Because it markedly

possesses the ability to embody actual characteristic of land demand of the real estate industry, the valid demand of town house can reflect the actual land need trend. For example, the amount of the valid demand of town house got to 2225.1 km<sup>2</sup> in the centre city of Wuhan in 1998, however, to 2003 it rose to 5311.6 km<sup>2</sup> with 2.4 time of which in 1998. Such huge increasing need bets your boots to cause city to satisfy with the huge need of the construction land (data source: The land storage supply center of Wuhan). At the same time, the increment of the city population and the expansion of the scale also stimulates the demand augmentation that uses the ground to the industry, business and infrastructures by all means.

In the light of supply and demand equilibrium analysis to the urban land, there are some conclusions which can be gained: 1) the elasticity of urban land supply is small, and the total amount of that correspondingly exists limit. In a period of aftertime, each land using type amount can't exceed which is defined to the maximum by the land using general planning inside the total programming time. That's to say, there are two asymptotic lines provided with the figure 1, dash line T1 and T2. 2) the urban land demand enlarges increasingly along with the development of the economy. 3) some measures must be taken to enhance the government income by adjusting and controlling urban land. If government indulges the urban land purveyance, when the urban land market calms down into balance or basically stability, the government income may be reduced. In Figure 1 at the point B1 the land supply and demand is attained balanced, and the land income is the dimension of the rectangle OP1B1L1; When the primary market supply is out of control, the land supply curve will shift to the right and the equilibrium point will be B2, as a result, the land income is the dimension of the rectangle OP2B2L2. The land price drops when government strengthen land delivery volume and land market reach the balance of land supply and demand, the land income might not increase, that is to say, it can't be totally guaranteed that the area of the first rectangle will certainly be smaller than the area of later rectangle. So, some measures must be taken to fortifiedly control the supply of land primary market, guarantee government's income maximization.

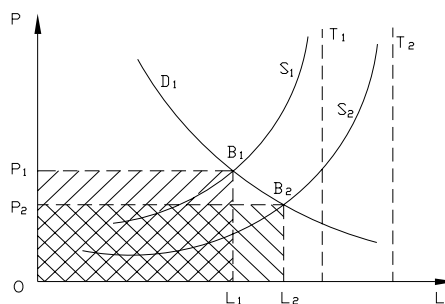


Figure 1 Equilibrium of Urban Land Supply and Demand

### 3. A Control Model

In terms of the supply mode of the land primary market, there's a systematic block diagram (Fig. 2) can be made to explain it. In the China land primary market at present, it is mainly to expropriate collective land and urban stocking land for the source of which the city supplies with. The sum of the volume of the two sorts can be appeased for the total amount of land demand. And one part of this total amount comes through selling land ownership to attain it, the other can be acquired which is purchased or other way to enter government land store base, then transferred the land use right. Because not all store land is purchased, the part of which is still in land

store base have not been sold and become new urban stock land again partly, just delay in supplying time. In addition, according to the stipulations of relevant laws and regulations of land management in China, government can purchase or regain some land that has already sold the right to use the land directly in certain circumstances; this part of land has entered government land stored base again. At present, because regional land storage systems are different, it is different that the way of land use right is assigned. After all in some provinces all the urban land must firstly be stored by government, and then has been put in order through land development and arrangement; other places urban land use right can be sold directly out of storing. Considering actual land supply mode in China, the model is applied d to analyse urban land purveyance illustrated in Fig. 2.

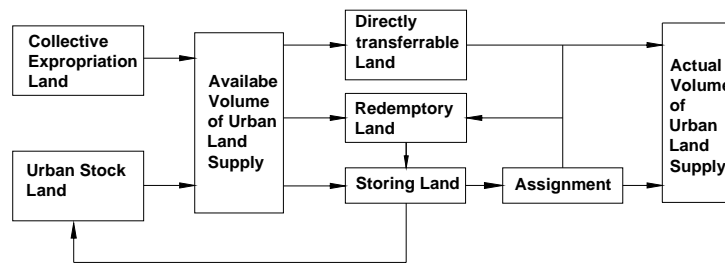


Figure 2 Systematic Block Diagram of Urban Land Supply

According to above-mentioned argumentation, the control model can be correspondingly set up. It is  $U(k)$  to denote the quantity of collective expropriation land on  $k$  period, set as control variable; it is  $X_1(k)$  and  $X_2(k)$  respectively to figure the quantity of urban stock land and storing land, set as the state variable; actual volume of urban land supply  $Y(k)$  is set as the output variable. Urban stock land and outskirts expropriation land is the main resource which is suitable for the land demand. And what primarily meets the market demand of urban land is the volume of actual assignment land, which is shown as two parts in the block diagram above, and one part of it comes from directly transferred land, another from the city storing land. In order to make the model succinct, define the parameter  $\alpha$  is the directly transferred land ratio of the total available supply land, and this directly transferred land have not entered urban storing land base. In order to adjust and control the urban land market, it might not be all the storing land is being all sold out, so define  $\beta$  is the assignment ratio of urban storing land, some of which origins from old city rebuilding and urban idle land. And the parameter  $\theta$  is defined the proportion between the redemptory land and the actual volume of urban land supply.

Based on the systematic block diagram and relevant assumption, can set up the following equalities.

$$\begin{cases} Y(k) = \alpha[U(k) + X_1(k)] + \beta X_2(k) \dots\dots\dots(1) \\ X_1(k+1) = X_2(k)(1 - \beta) + \theta Y(k) \dots\dots\dots(2) \\ X_2(k+1) = [U(k) + X_1(k)](1 - \alpha) - \beta X_2(k) + \theta Y(k) \dots\dots\dots(3) \end{cases}$$

The equality (1) indicates that, the supply volume of urban land this issue is the sum of directly transferred land and the directly transferred part of which has been in urban land store base; the equality (2) shows that the quantity of the urban stock land in the

next period will be the sum of the redemptory land and the unsupplied urban land which has been in land storing base in this period; the equality (3) interpreted that, the volume of the urban store land in the next period quantity of land will be combined the redemptory land which is retrieved by government and the unsupplied urban land which has entered the store land base in this period, thereinto, the available volume of urban land supply is made up of the quantity of stock land and the expropriation land in this period. It must be mentioned in the article that the redemptory land is not usually regained in this period but the before. For analysis convenience of question, this part of the redemptory land use the volume of the actual volume of urban land supply as the comparison radix. That is to say, the land redemptory land quantity equals to the product of  $\theta$  and the actual volume of urban land supply. Actually redemptory land quantity is generally smaller than which of the supply land in this period in China, so, these three parameters are all less than 1.

According to the equality (1), (2) and (3), build the control model:

$$\begin{cases} X_1(k+1) = \alpha\theta X_1(k) + (1 - \beta + \theta\beta) X_2(k) + \alpha\theta U(k) \\ X_2(k+1) = (1 - \alpha + \alpha\theta) X_1(k) + (\theta\beta - \beta) X_2(k) + (1 - \alpha + \alpha\theta) U(k) \\ Y(k) = \alpha X_1(k) + \beta X_2(k) + \alpha U(k) \end{cases}$$

Written by the matrix type,

$$\begin{cases} X(k+1) = AX(k) + BU(k) \\ Y(k) = CX(k) + DU(k) \end{cases}$$

In the equations set,  $A = \begin{pmatrix} \alpha\theta & 1 - \beta + \theta\beta \\ 1 - \beta + \alpha\theta & \theta\beta - \beta \end{pmatrix}$ ,  $B = \begin{pmatrix} \alpha\theta \\ 1 - \alpha + \alpha\theta \end{pmatrix}$ ,  $C = (\alpha, \beta)$ ,  $D = \alpha I$ ,  $I$  is the identity matrix. This control model is the discrete-time steady linear model.

#### 4. Analysis of the Model

We can simply definite the systematic stability as following: the system is in the balance state in advance, has deviated from this state after being interfered. Removing the interference of this system, it can get back to the initial balance state, and then this system is gradual stabilization.

Setting  $\lambda_1, \lambda_2, \dots, \lambda_n$  as the characteristic number of the systematic matrix  $A$ , according to the relevant theory, the necessary and sufficient condition of gradually stability is that all the characteristic number are not greater than 1, i.e.  $|\lambda_i| < 1, i=1,2,\dots,n$ . So, if the land supply system would reach the balance, the characteristic value of systematic matrix  $A$  should be smaller than 1. Through calculating, this systematic matrix characteristic value of model should meet the following equality:

$$\lambda^2 - (\alpha\theta + \theta\beta - \beta)\lambda - (\beta^2 - \beta - \theta\beta^2 + \theta\beta - \beta + \alpha\theta + 1) = 0, \text{ let } d = \alpha\theta + \theta\beta - \beta, \text{ get}$$

$$\lambda_{1,2} = \frac{d \pm \sqrt{d^2 - 4(\beta^2 - \beta - \theta\beta^2 + d + 1)}}{2},$$

$$\text{When } |\lambda_{1,2}| < 1, \text{ i.e. } \left| \frac{d \pm \sqrt{d^2 - 4(\beta^2 - \beta - \theta\beta^2 + d + 1)}}{2} \right| < 1, \text{ can get } \beta < \alpha \cdot \frac{\theta}{1 - \theta}$$

So when  $\beta < \alpha \cdot \frac{\theta}{1-\theta}$ , then  $|\lambda_{1,2}| < 1$ , The system model can reach the balance t at this moment.

Using the land supply model, we try to make the system be balanced. The solution is made up of two parts mainly.  $A^k x(0)$  is a system response to the initial state.

$\sum_{i=0}^{k-1} A^{k-(i+1)} BU(i)$  is the response to the inputs. When it is gradually stable, the system's response to the initial state will tend towards zero with the increase of k, because the characteristic number of matrix A is smaller than 1. Control variables and state vectors sum variable output which has indicated in the article. Then, we can take the place

of  $Y(k) = C \left[ A^k x(0) + \sum_{i=0}^{k-1} A^{k-(i+1)} BU(i) \right] + DU(k)$ . When k is increased, the influence of initial state on the output of the system is smaller and smaller.

When the urban land control model is satisfied with  $\beta < \alpha \cdot \frac{\theta}{1-\theta}$ , the volume of the stock land and storage land under the initial state will have lesser influence on the urban stock land, storing land and the urban land supply after a long time. And the stock and storage level of urban land will spontaneously approach to balance state with time. Setting  $X_e$  as the balance state of the system, we can calculated for  $X_e = (I-A)^{-1}BU(k)$ . Then we can know the stock and storage level of the urban land under balance state. That is to say, the land supply level is determined by the amount of land

expropriation. On the contrary, if this system is satisfied with  $\beta > \alpha \cdot \frac{\theta}{1-\theta}$ , it will not advance gradually stabilization. Because the system responses to the initial state make the systematic state variable fluctuate, the supply amount of urban land will fluctuate, even bigger and bigger. Then, it will influence the equilibrium of supply and demand and produce the bad chain reaction of the land market. So, it is necessary to maintain the relationship of the rate of land selling, rate of land storage and rate of land reclaiming reasonable, thus make land supply keep certain stability.

The model is hoped to be controlled, namely as we adjust the variable in the model, the expected results can be reached by the system dynamic operation. Obviously, the anticipated level that we cared about most is systematic output, namely whether the output volume of urban land could reach the level that we have established some time before; if can reach, the model is called output-controllable. Adopting to adjust parameters the system output can be controllable. Supposing its initial state  $X(0) = x_0$ , model output volume at the certain moment  $N > 0$ , can reach the target value  $Y(N) = y_n$ .

Due to  $Y(k) = CX(k) + DU(k)$ ,

$$Y(N) = C \left[ A^N x(0) + \sum_{i=0}^{N-1} A^{N-(i+1)} BU(i) \right] + DU(N), \text{ deforming}$$

$$C \sum_{i=0}^{N-1} A^{N-(i+1)} BU(i) + DU(N) = y_n - CA^N x(0), \text{ writing as matrix form}$$

$$\begin{bmatrix} D & CB & CAB & \dots & CA^{N-1}B \end{bmatrix} \times U = y_n - CA^N x(0), \text{ and } U \text{ is the vector } (U(N), U(N-1), \dots, U(0))^T. \text{ If let this equation group be solved, condition that should}$$



be met is that the rank of the matrix  $[D \mid CB \mid CAB \mid \dots \mid CA^{N-1}B]$  is equal to the rank of the matrix  $y_n - CA^N x(0)$ . Therefore, if the parameters  $\alpha$ ,  $\beta$  and  $\theta$  are rationally controlled and adjusted, the equation group will have solution and the model will be controllable. That's to say, the expected land supply target can be reached for some time under a certain initial state.

This model can be used to predict the state variable and output variable, namely to divine the volume of the stock land, storing land and urban land supply. According to the following formula,

$$X(k) = A^k x(0) + \sum_{i=0}^{k-1} A^{k-(i+1)} BU(i), \text{ and}$$

$$Y(k) = C \left[ A^k x(0) + \sum_{i=0}^{k-1} A^{k-(i+1)} BU(i) \right] + DU(k)$$

If land expropriation level is known from initial state to the prediction k period and the parameters  $\alpha$ ,  $\beta$  and  $\theta$ , the volume of the stock land, storing land and urban land supply will be obtained in the k period.

## 5. Conclusions

Control of land supply is the key to adjust the amount of land demand and supply for balance. The government should channel off the demand of urban land to stabilize the urban land market on the basis of the control of its supply. Analyzing the control model there will be some conclusions as following.

Firstly, one of the means to control the urban land supply is that government should rationally frame the amount of directly transferred land, the storing land and the redemptory land. When the control model is asymptotically stable, the fluctuation amount of the urban land supply by expropriated land ineptively can be suppressed gradually to degradation. And when the model output is controllable, government can achieve the expected amount of the urban land supply by adjusting and controlling those three variables. According to the forenamed equality (1), if the urban land supply need to increase in the short period, the amount of directly transferred land and the storing land should be enhanced appropriately, which is equal to augment the parameter  $\alpha$  and  $\beta$ ; contrarily, the adjustment should be reverse.

Secondly, the sticking point of the urban land supply control lies on the land expropriation control which happens on the rural-urban fringe. When each of the transferred land amount of the directly transferred land, the storing land and the redemptory land keeps invariant basically, in response to the land output formula

$$Y(k) = C \left[ A^k x(0) + \sum_{i=0}^{k-1} A^{k-(i+1)} BU(i) \right] + DU(k),$$

the quantities of the urban land supply primary rests with the land expropriation on the urban-rural fringe after a period of time. Maybe the stocking urban land can be satisfied with the land demand in a short time, but considering in a long run the origin of urban land use scale expansion mostly will hail from the occupied farm land which is around city. This process is also anastomotic with which is actually happening. Consequently, in order to control city expansion, government should strictly restrain banlieue land expropriation.

Lastly, the mechanism of urban land supply should be taken into account when its demand and supply is explored. Based on the land output formula, urban land supply is not only related with the current land expropriation and stocking land, but also the transferred land, the storing land and the redemptory land in prophase; and current urban land supply is not only effected by which in the prior period, but it will impact on the future land supply. If we want to concretely measure the influence, in terms of land output formula, let the current quantity of expropriation land equal to 0, input other corresponding data, then we can calculate it easily. Therefore, government should considerately analyse the land supply mechanism, according to the practical situation, select the correct parameters and time then institute the rational urban land supply policy which is farthest suit for the demand for the land market balance.

## 6. Discussion

The assumption of this control model is that the level of directly transferred land, the storing land and the redemptory land is invariable, that's to say, parameter  $\alpha$ 、 $\beta$  and  $\theta$  are all constants. But in reality those parameters are all the time variables. So the model can be optimized to linear nonsteady control model. Otherwise, the model just discuss the quantity of urban land supply, doesn't involve the relationship between price and quantity of the stocking land, incremental land and redemptory land. As a result, the analysis need to be further. Ultimately, the model also doesn't embedded refer to the urban land demand, if we build a new model which treat urban land supply as the input of urban land demand system, then it will be more instructive and profitable.

## 7. References

- National Bureau of Statistics of China. China Statistical Yearbook(2003). China Statistics Press, 2004
- Zhang Jin-shui, Economic Cybernetics of Deterministic Dynamic System. Tsinghua University Press. 1989, 29-30
- Zeng Xiang-jin. Elements of Economic Cybernetics. Science Press. 1995, 55-85
- Hal R. Varian, translated by Fei Fang-yu. Microeconomics : Modern Viewpoint. Shanghai Shenghuo-Dushu-Xinzhi Joint Publishing Company and Shanghai People's Publishing House, 2003, 360-365
- ZHANG An-lu, MAO Hong. Rural-urban land conversion and The primary land market equilibrium. Journal of Central China Normal University : Natural Sciences, 2004, 34(2)
- Cheng Ye. Primary Research on Land Use Control and Land Use Zoning Control. China Land Science, 2001, 15(4), 22-25
- Yang Gang-qiao. Discussion about the equilibrium of urban land supply and demand. China Land Science, 1998, 12(4), 21-23
- Yang Gang-qiao. Study on Controlling Town Land Sprawl in Foreign Countries. Modern Urban Research, 2004, 19(111), 57-60
- Lu Xin-hai. Land Demand and Supply in Urbanization. China Real Estate, 2004, 1, 30-32
- Liu Wei-dong. Study on Land Supply and Development in Urban China. City Planning Review, 2002, 15(4), 37-40

Geoffrey K. Turnbull. Urban Growth Controls: Transitional Dynamics of Development Fees and Growth Boundaries [J]. Journal of Urban Economics, 2004, 55 ( 2 ) , 215-238

## Planning and Governance II

## **Regenerate the Historical City? --- Analysis on the Urban Governance Mechanisms and Planning Implementations in Xi'an, China**

**Bining ZHAI**

*Center of Urban Planning and Environmental Management, the University of Hong Kong*

### **Abstract**

Urban conservation is an important and indispensable urban planning issue in the regeneration of historical cities. When many such cities are undergoing the transformations through conservation or preservation strategies, as one of Chinese Historically and Culturally Famous Cities, Xi'an attempts to take measures of both urban conservation and active redevelopment. Nevertheless, within the background of rapid urbanization and market economy, can this historical city find a good balance between these two very different approaches, while still trying to maintain its valuable historical identity? Obviously, whether successful or not, its experimental attempts could provide many implications to other cities. Based on Xi'an case study, the paper argues enabling urban governance mechanisms exert great influences in the urban regeneration processes. However, as can be observed, the social perceptions from local community to the regulations and rules also play a decisive role when the planning mechanisms are facilitating and controlling the urban development.

**Keywords:** Urban regeneration and conservation; Urban governance mechanism; Historical residential area; Social perception

# **Land Banking Mechanism and Its Effects on City Development in China**

**Dingxi HUANG**

Centre of Urban Planning and Environmental Management,  
The University of Hong Kong  
Tel: (852) 63351396  
Email: dxhuang@hkusua.hku.hk

## **Abstract**

Land banking was a mechanism initiated in some western European cities for directing urban development in early 1900's. Under this mechanism land is resumed by public authorized organizations and will be held for future use to implement public land use policies.

Some Chinese cities began their own land banking operation soon after this mechanism was introduced to China during the urban land reform in the 1990's. Since late 1990's central government has made concerted efforts to set up an open and fair land market while city governments have been keen to promote local economy through more active participation in the land development process. The joint forces have resulted in a new administrative framework of market for urban land use right (LUR) that would strengthen the role of land banking by city governments. Land banking mechanism is now widely practiced in over 1,600 cities or counties in China.

As a method of public intervention on the land market, land banking in western cities is affecting city development in the aspects of urban growth pattern, real estate price and public revenue. Also as a tool for city governments to intervene the LUR market, land banking in China should have potential effects on city development. This paper will begin with a review of international land banking practice. It further summarizes the characteristics the characteristics of land banking in China and gauges the current practice in China with international experiences so as to explore the possible aspects of land banking mechanism's effects on city development in China.

**Keywords:** land banking, city development, China

## **1. Introduction**

Land banking is a mechanism initiated in western countries over 100 years ago referring to the advance acquisition and reservation of land before development. Evans (2004) defined land banking as acquisition of land ahead of development either by construction companies or by central or local government or their agencies. According to Evan's definition, there are two categories of land banking including land banking by the public representatives and land banking by private land development companies. An earlier definition narrowed down land banking as public or publicly authorized acquisition of land to be held for future use to implement public land policies (Strong 1979). This mechanism was introduced to China in the

1990's during the urban land reform process and soon became popularly applied by land administration departments of cities. Strong's definition fits the situation in China better so that land banking discussed in the latter part of this paper will focus on land banking by public representatives.

As a method of public intervention on the land market, land banking in western cities is affecting city development in several aspects. Also as a tool for city governments to intervene the LUR market, land banking in China should have potential effects on city development. An exploration on how land banking mechanism in China is affecting city development will help to formulate an optimized land banking mechanism to facilitate improvements of land use policies in China. This paper will begin with a review of international land banking practice. It further summarizes the characteristics of land banking in China and gauges the current practice in China with international practices and experiences so as to explore the possible aspects of land banking mechanism's effects on city development in China.

## **2. International experience of land banking**

### **2.1 Evolution of land banking in western countries**

Land banking as a mechanism of city government's involvement in the land development process was first initiated in the Amsterdam, the Netherlands in late 1890's. Such mechanism was also adopted by several western countries such as Sweden (since 1904), Canada (since 1950's) and France (since 1958) during the last century. And since the 1970's several pilot projects of public land banking were carried out in some American cities(Huang et al. 2002).

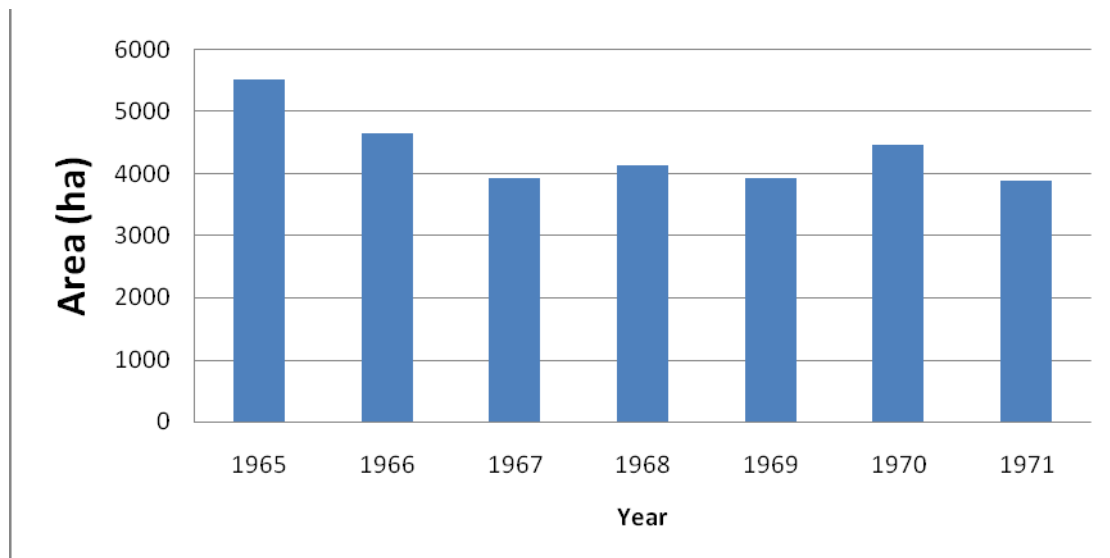
Publications of research on public land banking in western countries were mostly published during the 1970's when planners in America were enthusiastically introducing public land banking as a tool for better control of urban growth.

### **2.2 Effects of land banking on city development in western countries**

As preparation to introduce land banking to the U.S. scholars in northern America reviewed institutional framework and practice of public land banking in Europe and summarized the key functions that land banking may achieve: control on urban growth pattern, capturing capital gains for public finance and land price regulation.(Flechner 1974)

#### *Control on urban growth pattern*

On the aspect of control on urban growth, both the experiences in Europe and effectiveness in U.S. pilot projects were evaluated. The key of successful growth control was to put what is critical for future development (either areas needs to be preserved or essential areas for important development in the future) in to the public land bank so that the development of such critical areas were under full control of the public to avoid disorder development.(Strong 1979; Enders 1986)



**Fig 1 Municipal land acquisition in the Netherlands, 1965-1971**  
(Source Adapted from Passow, by Strong, 1979)

For example, in the Netherlands municipal governments acquired large quantity of land in periphery regions around major cities in order to achieve smooth implementation of plans. Fig1 shows that the annual land acquisition of land by municipal governments in the Netherlands varied around 4,000-5,500 ha. Even today the built-up area in the Netherlands is 4000 sq.km. The annual acquisition in that period was as significant as over 1% of the built up area of the country each year. In France, besides direct land acquisition by local governments some state owned regional land bank corporation were set up to purchase land at the request by local governments or public agencies for general public interest. (Enders 1986) Nantucket County Land Bank was established to purchase land “known to be needed by the public in the future for active and passive recreation uses.” ( Melious 1985)

#### *Capturing capital gains*

Given enough statistics data, the capital gains captured by land banking can be estimated via empirical studies. Based on ex post analysis, Ratzka (1981) claimed that Stockholm achieved the annual rate of return on land bank operation was 5.5% during 1908-1970 when providing lease fee below market level for low- and mid-income housing. However he continued to argue that the practice as a public finance tool for affordable housing was effective but not as efficient as direct subsidized allowance.

#### *Regulation on land price*

Land banking’s impact on land price had been under heat debate. Using stock-flow analysis approach, Carr and Smith(1975) reached the conclusion that public land banking may not have the ability to regulate price of developed land. Following that article several papers were published on the same journal expressing different opinions and analysis. Also based on theoretical analysis Evans (2004) agreed with Flenchner (1974) that land banking practice gives city governments power to intervene the land market, to result in either higher or lower land price by setting the expected growth of location value. The reason why there is debate on this issue is that the theoretical analysis conducted was all following the neo-classic economics approach. Such approach usually relies on several assumptions. Different understanding over these assumptions may lead to various results. If a combination of



both empirical and theoretical analysis of this issue can be done, the results would be more reliable.

Based on discussion above, land banking practices can be viewed as a tool for the government to intervene land market in the purpose of growth management and plan implementation.

### 2.3 Recent development of land banking around the world

Effective and efficient operation of land banking is facing obstacles such as people's belief, legal basis, sufficient scale, co-ordination and finance, especially in countries who believe in private land ownership (Enders 1986). Hence, many local governments in the west have shifted to alternative approaches to achieve the proposed functions of public land banking. Such alternative approaches include land assembly (Louw 2007), urban growth boundary (Ding 1996) and transfer of Development Right (Thorsnes 1999) etc.

Recent literatures also showed that public land banking approach are revitalizing in some developing or transitional economy besides China. In central Europe, public land banking is being practiced to solve the problem of fragmentation of agricultural lands. In Africa, a public land banking process named "land resettlement" as a way to control social tensions arising from imbalanced distribution of resources, local overpopulation, unemployment and involuntary displacement in the past (van Dijk and Kopeva 2006). Also in some Southern Asian cities including India and Bangladesh are currently implementing land banking policy. (UNESCAP 2007)

Summing up all the review of international practice, land banking had been a significant approach of the governments in some western countries to avoid disorder urban development during the stages of industry cities. However before the research on its mechanism and impacts on urban development was systematically well-developed most cities in west developed countries have entered the stage of post-Fordism. Nowadays, some developing or transitional countries are further developing public land mechanism in need of their own social-economic development pattern.

## **3. Development of Land banking in China**

### **3.1 Review on domestic research on land banking in China**

The fast booming practice of land banking of city governments arouse strong research interest of scholars of urban studies and land management in mainland China. Various journal articles are published in Chinese academic journals and a number of graduate students in universities are choosing the field as their dissertation topic.

As a fast booming practice initiated by local governments, the land banking authorities around China are not following a unified national standard or operation procedure. Introduction of different practices are one of the main themes in the field. Some large cities such as Hangzhou, Shanghai, Guangzhou and Nanjing were playing active roles in establishment of the policy and procedures of public land banking so that researchers summarized their operation models as paradigms for the practices in other countries. (Ma 2003) The abundant literature introducing the detail practices of different cities can provide essential preliminary information for further research.

Another category of Chinese publications of land banking concerns the practical problems of the field. Due to the unique social-economic background of Chinese cities, public land banking models of foreign cities cannot be directly applied. Researchers in mainland then put forward many proposals or solutions for the problems arising with the implementation of public land banking in China. For the stage of acquisition the decision making of quantity and location of land for banking as well as source for financing the practice are the major research focuses. For the stages of holding and disposal some researchers have explored risk management of the land banking problems (Yang 2006). On the issue of operational environment of public land banking some proposals for improving institutional structure and filling the gap of legislation for land banking are discussed (Wang 2004).

Due to the immature mechanism and fast booming speed of public land banking in China, the research on the field so far are mostly focusing on description of the ongoing development and reaction to practical problems. However, some more fundamental issues such as why local governments are enthusiastically promote public land banking and its impacts on urban development are still remaining at the stage of some preliminary discussions. The following sections will elaborate how and why land banking mechanism became popularly implemented among Chinese cities. What's more the Chinese mechanism will be gauged with experience from international practice to discuss the possible effects of this mechanism on city development.

### **3.2 Introduction of land banking during the overall urban land reform process in China**

The 30 years of opening up and reform of China since late 1970's has brought about not only significant economic progress but also remarkable changes of social and natural environment. As one of the key elements for development, the reform on land administration of both urban and rural areas went on simultaneously with steps of the overall reform of the country.

During the planned economy period, a dual system of public land ownership was formed in China with the urban land owned by the state and rural land owned by collected economy organizations of villages. The 1982 Constitution (Article 10) abolished the private ownership of urban land and clarified that all urban land belonged to the state and that rural land was owned by farmers collectively except for the land stipulated by law as state land. However, state owned land in the urban areas was separately occupied by different government units and work units rather than under the unified ownership of state or local governments.

When opening up and reform began, land reform in China was also conducted in a policy framework with different reform procedures of urban and rural lands. Rural land use rights were decentralized to the individual farm households through contracts of operation rights at the beginning of reform at late 1970's. Land reform in the urban area initiated in 1988 when the amendment of Land Administration Law of China recognized the separation of land use right from land ownership of urban land and allowed the transfer of land use right in the market.

A number of commentators on Chinese land reform including Yeh and Wu (1996) have identified 1987 as the year when urban land reform commenced and the first plot

of land was sold to land-users in Shenzhen, a Special Economic Zone (SEZ) adjacent to Hong Kong. Based on the national events in the reform process, the urban land reform is divided into three stages: 1984–87, the introduction of the land-use fee and arable land occupation tax; 1988–90, the establishment of the legal foundation for and the pilot practice in the paid conveyance of LURs in state-owned urban land and the introduction of the urban land-use tax; 1990– early 2000's, the nation-wide development of the paid conveyance and transfer of LURs in state-owned urban land.(Xie, Parsa, and Redding 2002)

During the process of urban land reform and establishment of the land market the property rights over land were delineated ambiguously between the principal and agents —i.e. between the central state, local governments and SOEs, which lead to a dual-track market. In the mid-1990's, the concept and practice of land banking were introduced to some cities in China. Public land banking authorities were established by city governments to acquire land for comprehensive city development and supply land use right publicly at market price. Guangzhou Land Development Centre was established in 1992 to facilitate comprehensive development of new city centre via land banking mechanism. However, establishment of Shanghai Land Banking Centre in 1996- recognized as the first city land banking authority in China in most Chinese literature because the Guangzhou Land Development Centre was not directly entitled as land banking authority. Such land banking authorities are the representative of the city governments' actual ownership and control of state-owned land in the land development process.

Under the dual-track market situation land use right could be obtained through tender or auction at market price or negotiation with the various work units owning state lands at much lower prices. At this period the role of land banking authorities was mainly to facilitate comprehensive development and provide financial support by land sale to the government. The share of total land supply by land banking was not significant. On the one hand the dual track land market mechanism contributed to a dynamic urban physical growth in many Chinese cities by bringing up a local property industry and opening up a land redevelopment market. On the other hand, such mechanism is also characterized by rent-seeking, hasty capitalization of land rents and inadequate order in land development.(Zhu 2004a)

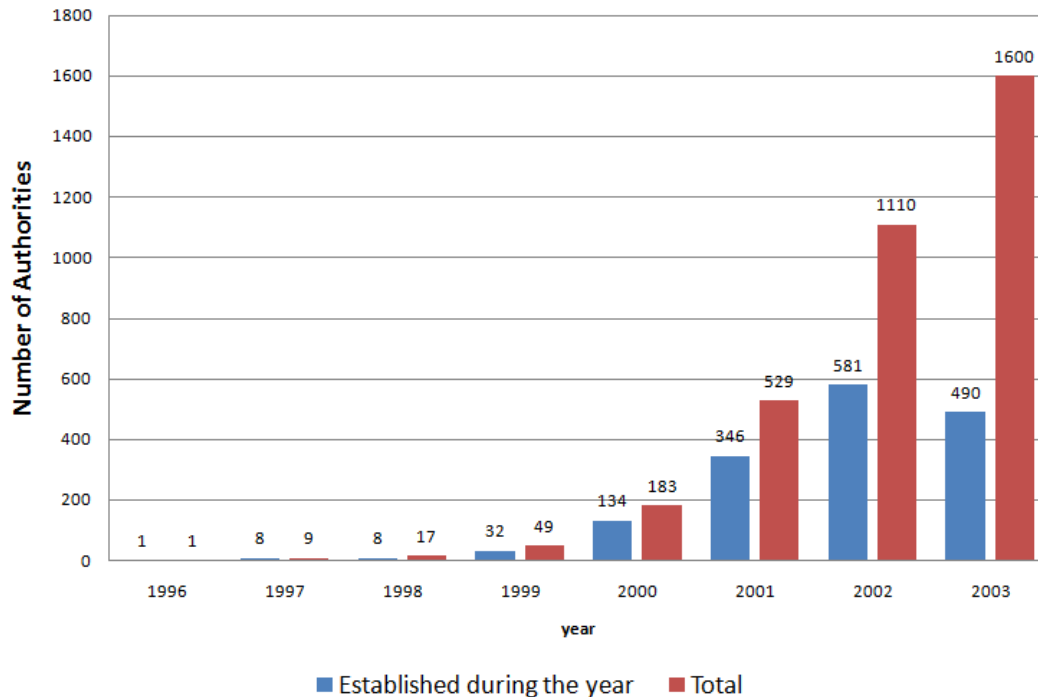


Fig.2 Number of land banking authorities in China 1996-2003 (Source: Yang 2005)

Fig.2 is illustrating the changes of numbers of land banking authorities in China, which shows that there is a dramatic increasing number of land banking authorities since 1999. 1600 cities or counties established land banking authorities by the end of 2003. Compared to the total 2300 of cities and counties in China, a majority of cities and counties have introduced the land banking mechanism, which shows that land banking is playing a more and more important role on the allocation of land use right in urban area. Both direct and in-direct promoting forces have lead to such increase.

Reviewing the media and academic journals in Chinese, two events can be identified as direct triggers to promote land banking mechanism in China. Minister of Land and Resources highly praised Hangzhou’s land banking experience at a conference of mayors in 1999. (Zhou, 1999) Two years later, State Council’s Announcement for strengthening state owned assets management recommended “cities with suitable conditions” can implement land banking to “strengthen the ability to adjust the land market”.(State Council,2001) The effects of these two direct triggers are significantly illustrated in fig 2.

Besides the direct driving forces, two other forces in the macro social-economic environment in the 21<sup>st</sup> century are also promoting the land banking mechanism. On one hand the state government’s effort for building up the fair and open land market and on the other hand is that the role of local governments are transforming into the local development state.

Regulation from the Ministry of Land and Resources (MLR) requires that rights to use all kinds of land for business use (including residential, commercial and tourism) must be sold publicly by bidding, auction and public announcement since 2002. Further control on industrial land sale was conducted in mid-2007 by MLR requiring the same public sales procedure as business land. Such policies are expressing that the state government is urging for a unified urban land market instead of the former dual

market to keep transfer of urban land use right in order. The effective implementation of such regulations would lead to the monopolization of first hand land supply for business and industrial use by the government and a transparent market price of second hand land use right transaction.

Simultaneously, decentralization during overall economic reform in China has turned provincial and municipal governments in to economic interest group preoccupied with local growth, and thus has turned them into development states. (Zhu 2004b; XU and YEH 2005) One of the significant reform procedures was the fiscal reform that redefined the financial responsibility of central and local states, to allow the latter greater financial flexibility and legitimacy in managing urban development through residual right (Zhang 1999). As real estate and property development are becoming one of the key economic sectors to support sound record of economic growth, city governments are also strengthening land banking practices for an active role in the land market.

Under the new administrative context of LUR market, the role local governments' land banking practices are strengthening. Because no more LUR transaction via negotiation is allowed all the LUR to be supplied for business and industrial use in the first hand market should first go into the land bank of city governments via the land banking procedure of land banking authorities. This significant change of LUR supply mechanism can be view as the attempt of strengthening local governments' control on urban land use through a more active participation in the land development process via land banking rather than administrative allocation of land.

### **3.3 Implementation of land banking in China with comparison to western practices**

Implementation of land banking mechanism in both western countries and China can be similarly divided into three major steps including acquisition, holding and disposition of land by the land banking authority. But the detail operation models in each step are different due to the unique land ownership system of each country.

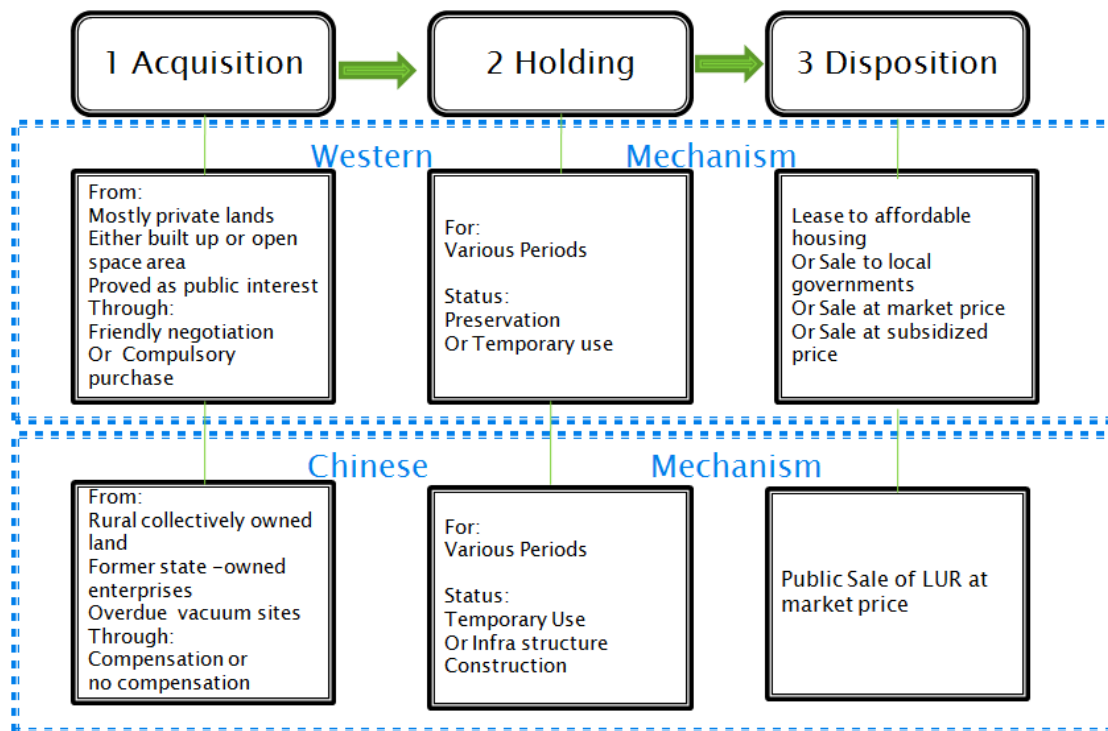


Fig 3 Comparison of land banking implementation in China and western countries

Fig 3 is illustrating a summary of comparison of difference in implementing land banking between the Chinese mechanism and western mechanism. From this comparison we can see the Chinese mechanism is an integration of the land banking concept and the unique state owned lease hold system in China. The land ownership system in China results in a more complex source of land acquisition and the land banking authorities' more active role in negotiation on compensation. Infrastructure construction on the land in land bank and public sale of LUR at market price during the disposition step implicates the aim at capturing the capital gains in land value of the city governments in China.

### 3.4 Characteristics of land banking in China

Although the concept of land banking in China were initially introduced as western experience to facilitate urban land reform its practice is following a way full of unique characteristics such as the macro environment of China during rapid economic growth and social-economic transition, a wide-spread of practice over most of the cities in China and its status as one of the key policy instrument of the emerging local development states in China. The following paragraphs will elaborate such characteristics.

Firstly, the introduction of land banking into China can be viewed as a simplified replication of a mechanism due to scarcity of suitable institutional framework. The transition of economic system and the complex situation of the dual-track urban land market at the beginning stage are both expecting a suitable institutional framework but creating such a framework for the newly emerging LUR market in China is difficult. Alternatively replication of the land banking mechanism from other cities or countries is of little cost. Hence the mechanism spread rapidly when it was recommended by the top officials and administrative document of the central government. However such fast replication process of the mechanism is rather

simplified because the central government did not provide detail instructions when suggesting city governments to implement land banking. Bar far there is no legislation at state/provincial level to regulate this mechanism. Land banking is generally an administration-oriented operation at city government level. Operation in each city is regulated under administrative documents published by its own local governments.

Secondly, land banking in China tends to focus more on land development process rather than the balanced objectives of city development. The mechanism was promoted and implemented by the land administration system of governments aiming a more ordered urban land market. The local development states are keen on the implementation the mechanism because of the incentive form LUR sales income. Other aspects such as social-economic re-structuring and applying land banking as an effective tool for land implementation are seldom considered by city governments.

#### **4 Discussion on effects of land banking mechanism on city development in China**

With reference to international experience discussion on effects of land banking mechanism on city development in China can be focused on two aspects, the similar effects as the western mechanism and the effects arouse from the characteristics of the mechanism in China.

##### **4.1 Similar effects as the western mechanism**

In order to test whether the similar mechanism as the western practices has lead to similar effects on land price, revenue of city governments and urban growth pattern empirical data of a case study on land banking practice in Guangzhou, China are applied to reach some preliminary judgments.

###### *Regulation on land price*

As required by MLR's policy in 2002 all urban LUR sales for residential and commercial uses should be conducted at public market price from city's land bank since that year. The city governments can play a more active role on regulating the market land price by deciding the amount and position of LUR sale based on their land bank reserve. However, at the same period the real estate market in China is experiencing a historical growth which results in a rapid growth of demand for land. Central government is making effort to stabilize the real estate price in order to maintain a stable social-economic environment. Whether or not land banking can achieve effective regulation on land price may be important to the success of central government's goal. For most cities in China, land bank was established only several years ago and the reserve is relatively limited. City governments' aim at revenue income from LUR sale will also affect city governments' decision on to what extent the land price should be regulated.

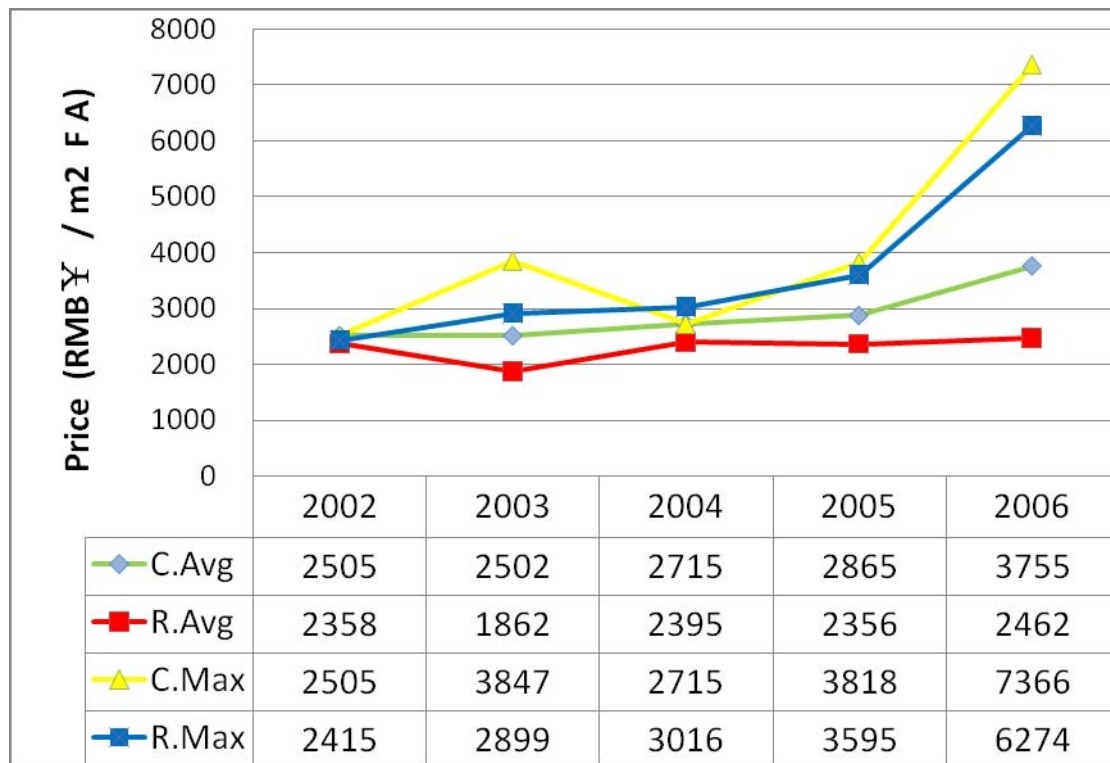


Fig.4 Price of LUR Sale from Land Bank of Guangzhou (2002-2006)  
 (Source: Generated from public database of website of Guangzhou Land and Housing Bureau [www.laho.gov.cn](http://www.laho.gov.cn))

Fig.4 illustrates the LUR price of commercial and residential land in Guangzhou City in the period in 2002-2006. City government did manage to stabilize the average land price by flooding the market with cheaper land in the suburb but could not influence the land price in city centre, which may be a more sensitive indicator of the price status. A preliminary judgment can be reached that with sufficient land reserve in the city's land bank city governments can achieve to stabilize the average land price by flooding the LUR market when demand is high.

*Revenue income of city government*

After the fiscal reform in the 1990's, city governments in China are relying more on land sale income to achieve fiscal balance. The introduction of land banking mechanism can help city governments to monopoly the LUR sales and receive more capital gains.



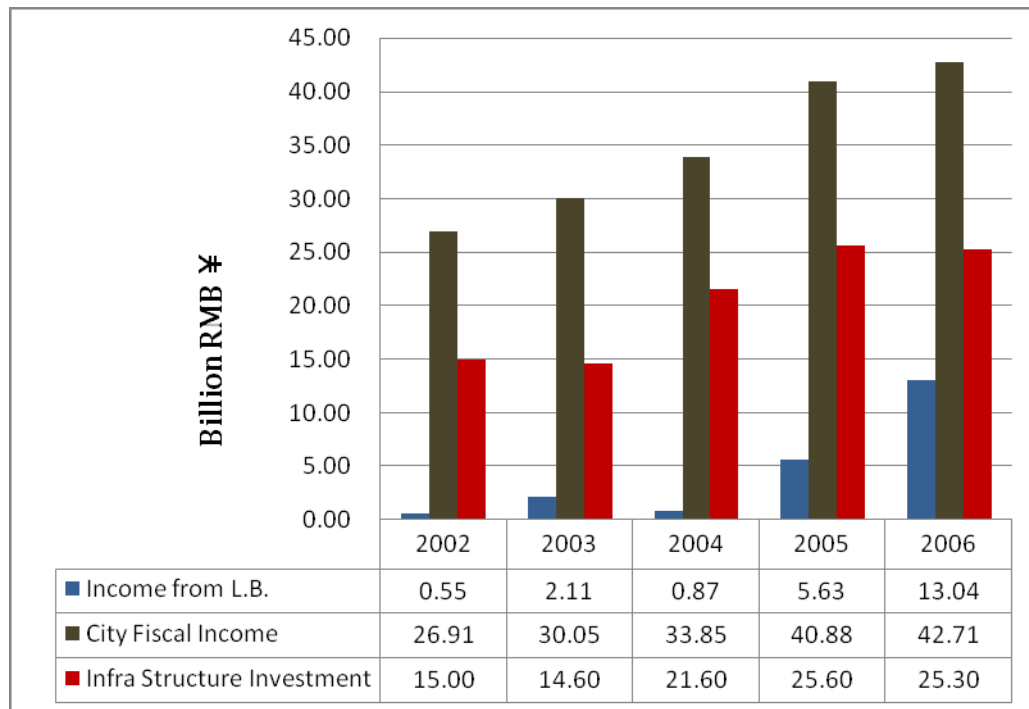


Fig.5 Comparison of land bank income, city fiscal income and infra structure investment of Guangzhou in 2002-2006

(Source: Generated from public database of website of Guangzhou Land and Housing Bureau [www.laho.gov.cn](http://www.laho.gov.cn) and Annual working report of Guangzhou Municipality Government to the people's congress. [www.gz.gov.cn](http://www.gz.gov.cn))

Fig.5 illustrates the comparison of land bank income, city fiscal income and infra structure investment of Guangzhou in 2002-2006. Fiscal income in the figure includes tax and funds but does not include the land sale income. The significant increase of Land sale income during the period can help the city government better balance the high density infrastructure investment and fiscal income.

#### *Control on urban growth pattern*

As discussed in the earlier section, the land banking mechanism is promoted by the land management system in governments. The issue of urban growth pattern is not as emphasized as the western mechanism. Some cities such as Guangzhou and Nanjing are integrating the urban planning authorities into the land banking mechanism by compiling plans for land banking jointly. A better co-operation can bring benefits on both more effective implementation of urban plans and better quality of land in land bank.

#### **4.2 Possible effects under the social-economic context in China**

Under the rapid development context of China, land banking may also influence the process of socio-spatial restructuring that are not included in experiences of western mechanism such as the re-distribution of residential areas of different social classes, speedy urbanization of the former rural areas affected by land banking and upgrade of industrial sector when industrial land is also included into the land banking mechanism. Detail explanation of these possible effects still needs further research and may be a new field of land policy research in China.

### **5. Conclusions**

The introduction of the once prevailing western mechanism of land banking into China is promoted by the land administrative system in China in response to the problems of the former dual-track urban land market situation. City governments in China as local development states are keen on establishment of land banking mechanism to facilitate their demand on LUR sale income. The implementation of land banking mechanism can help to city governments in China to regulate urban land price and generate significant income for their fiscal balance. But the lack of participation of planning system in the mechanism makes it not so effective as the western mechanism in control of urban growth pattern. Under the rapid development context of China, land banking may also influence the process of socio-spatial restructuring.

## 6. References

- AGO Yeh, F Wu. 1996. The new land development process and urban development in Chinese cities. *International Journal of Urban and Regional Research* 20:330-353.
- D'Arcy É, Keogh G. 1997. Towards a property market paradigm of urban change. *Environment and Planning A* 29 (4):685 - 706
- Ding, Chengri. 1996. Managing urban growth for efficiency in infrastructure provision: dynamic capital expansion and urban growth boundary models.
- Enders, M J. 1986. The problem of land banking: a French solution. *Environment and Planning C: Government and Policy* 4 (1):1-17.
- Evans, Alan W. 2004. *Economics, real estate and the supply of land*. Oxford, UK ; Malden, MA: Blackwell Pub.
- Flechner, Harvey L. 1974. *Land banking in the control of urban development*. New York: Praeger Publishers.
- Gibb, K., and M. Hoesli. 2003. Developments in Urban Housing and Property Markets. *Urban Studies* 40:887-896.
- Huang, Xianjing, Zhengdong Xie, Zhengbing Hu, Miao Tang, and Changchun Chen. 2002. Research on operation and reform of land banking in Nanjing. *Social Science in Nanjing* 2002 (9):87-93.
- Jack Carr, Lawrence B. Smith. 1975. Public Land Banking and the Price of Land. *Land Economics* 51 (4):316-330.
- Louw, Erik. 2007. Land assembly for urban transformation--The case of 's-Hertogenbosch in The Netherlands. *Land Use Policy* In Press, Corrected Proof.
- Ma, Xiaoming. 2003. The comparison on land reservation and management operating pattern, Huazhong Agritural University, Wuhan, China.
- Melious, Jean O., and Lincoln Institute of Land Policy. Land Policy Roundtable. 1985. *Land banking revisited : Massachusetts breaks the mold, Land Policy Roundtable basic concepts series ; no. 107*. Cambridge, Mass.: Lincoln Institute of Land Policy.
- Ratzka, Adolf Dieter. 1981. Land Banking in Stockholm. *American Planning Association. Journal of the American Planning Association* 47 (3):279.
- State Council. 2001. Announcement for strengthening state owned assets management.
- Strong, Ann L. 1979. *Land banking : European reality, American prospect*. Baltimore: Johns Hopkins University Press.
- Thorsnes, Paul & Simons, Gerald P W, . 1999. Letting the Market Preserve Land: The Case for a Market-Driven Transfer of Development Rights Program. *Contemporary Economic Policy*, 17 (2):255-266.

- UNESCAP. 2007. *Municipal Land Management in Asia: A Comparative Study* 2007 [cited 03-10 2007]. Available from [http://www.unescap.org/huset/m\\_land/chapter6.htm](http://www.unescap.org/huset/m_land/chapter6.htm).
- van Dijk, Terry, and D. Kopeva. 2006. Land banking and Central Europe: future relevance, current initiatives, Western European past experience. *Land Use Policy* 23 (3):286-301.
- Wang, Baoxin. 2004. Reflection on land banking mechanism and its legislation basis, West China University of Political Science and Law, Chongqing, China.
- Xie, Qingshu, A. R. Ghanbari Parsa, and Barry Redding. 2002. The Emergence of the Urban Land Market in China: Evolution, Structure, Constraints and Perspectives. *Urban Studies* 39:1375-1398.
- XU, JIANG, and AGO YEH. 2005. City Repositioning and Competitiveness Building in Regional Development: New Development Strategies in Guangzhou, China *International Journal of Urban and Regional Research* 29 (2):283-308.
- Yang, Jun. 2006. Risk management in land banking, Tongji University, Shanghai, China.
- YANG Linjie, CHEN Qihui, LI Gang, GAO Yong, TAO Xiaolong. 2005. THE ANALYSIS OF DEVELOPMENT OF LAND - BANKING ORGANIZATIONS IN CHINA. *Economic Geography* 25 (4):557-561.
- Zhang, L.-Y. 1999. Chinese central-provincial fiscal relationship, budgetary decline and the impact of the 1994 fiscal reform: an evaluation. *The China Quarterly* 157:115-141.
- Zhou, Yongkang. 1999. Speech on mayors' conference on integrated land use. *China land* 1999(12).
- Zhu, Jieming. 2004. From land use right to land development right: institutional change in China's urban development. *Urban Studies* 41 (7):1249-1267.
- . 2004. Local developmental state and order in China's urban development during transition. *International Journal of Urban and Regional Research* 28 (2):424-447.

# **Industrial Land Use Policy and Entrepreneurial Regional Governance in Pei-Pei-Kee Metro Triangle – An Schumpeterian Exploration in the Context of Greater China Intercity Network**

**Cassidy I-Chih LAN**

Department of Real Estate and Built Environment, National Taipei University,  
Taipei, Taiwan ROC 106  
Tel: +886 2-2502-1520#27774  
FAX: +886 2-2507-4266  
Email: yichilan@gmail.com

## **Abstract**

The paper, based on the *Schumpeterian approach* of entrepreneurial city, attempts to explore the redevelopment institution of industrial land use in 'Greater Taipei metropolitan area' (*Pei-Pei-Kee metro triangle*, PPKMT or PPK). The urban-regional experience offers us an in-depth observation to examine the renovation of old industrial zones and the governance dilemma due to policy separation from the individual local states. In order to explore the existing institutional dysfunction of governing industrial space and relative land use policy in PPK, the paper, in a multi-scalar perspective, also indicates that the main reasons impeding PPK's industrial land redevelopment are imputed to the cross-boundary contestation for individual county/city development, outdated industry-space linkages inconsistent with economic restructuring, and unstable geo-political and economic relationship among Greater China intercity networks. Fragmentary industrial land management has to be integrated into entrepreneurial regional governance to implement the redevelopment of cross-boundary industrial corridors and tackle the temporal-spatial dynamics in the Greater China intercity network.

## **1. Introduction**

As globalization has intensified the transformation of urban industrial structure since the late 1970s, regenerating distressed industrial zones becomes one of the most popular issues in the literature of contemporary urban studies. In order to find new economic chances, entrepreneurial city is widely regarded as a new governance mode for city governments to reinvent themselves to counter the impact of industrial leaving and fierce inter-urban competition (e.g. Harvey, 1989a; Parkinson, 1991; Hall and Hubbard, 1996; Wilson, 1995; Griffiths, 1998). Beyond the business-like place-making process, progressive entrepreneurial urban governance has to perceive the geographic dynamics of spatial division of labor, create vivid urban positioning, layout pragmatic and innovative strategies, and construct strong time-space articulation to other spatial scales. That is, a multi-scalar scanning plays an important role to analyze the viability of entrepreneurial city (-regional) governance (Jessop and Sum, 2000; Jessop, 2002; Wu, 2003).

The paper, based on the *Schumpeterian approach* of entrepreneurial city, is focused on the redevelopment institution of industrial land use in 'Greater Taipei metropolitan area' (*Pei-Pei-Kee metro triangle*, PPKMT or PPK). The industrial land development in this area was driven by the intervention of state economic strategies in 1960s, but it has faced severe recession and needed to be redeveloped when the mainland coastal cities have actively attracted FDI through their comparative advantage since 1980s. Urban competition within Greater China intercity network exacerbates the land vacancy in PPKMT and propels the metropolitan to reshape innovative industrial corridors across city-county boundary. The urban-regional experience offers us an in-depth observation to examine the renovation of old industrial zones and the governance dilemma due to policy separation from the individual local states. In order to explore the existing institutional dysfunction of governing industrial space and relative land use policy in PPK, the paper, in a multi-scalar perspective, also indicates that the main reasons impeding PPK's industrial land redevelopment are imputed to the cross-boundary contestation for individual county/city development, outdated industry-space linkages inconsistent with economic restructuring, and unstable geopolitical and economic relationship among Greater China intercity networks. Therefore, fragmentary industrial land management has to be integrated into entrepreneurial regional governance to implement the redevelopment of cross-boundary industrial corridors and tackle the temporal-spatial dynamics in the Greater China intercity network. A structured competitiveness is required to be reconsidered for the prospect of PPK in the future.

The following sections are separated into four main parts to take account of the above discourse and argument. Firstly, briefly reviewed is the multi-scalar perspective in the discourse of entrepreneurial city to understand why the spatial fix of mobile capital is important for competitive cities and regions. Secondly, the paper reviews the industrial land use system in Taiwan and the PPK's industrial restructuring due to the new international division of labor in the globalizing Greater China intercity network. Thirdly, based on the multi-scalar exploration and entrepreneurial discourse in the Schumpeterian approach, the paper rethinks what are the critical issues about establishing strong competitive strategies for the redevelopment of distressed industrial space and explores the governance dilemma about remaking the post-industrializing PPK as the prominent entrepreneurial urban-region in Pacific-Rim. Finally, a brief conclusion is drawn.

## **2. Entrepreneurial city as a geographical competitor seeking for multi-scalar articulation**

### **2.1 Globalization, NSDL, and Intercity competition**

Unlike internationalization, globalization is a new phenomena gradually emerging in the mid-1970s. While the former is widely known as the geographical extension (especially in simple terms) of economic activities across national boundaries, the latter further means functional integration of internationally dispersed economic activities with much wider geographical scope and highly integrating intensity (Dicken, 2003) (fig. 1). No matter what is the way of performing globalization in terms of the 'space of flows' (Castells, 1989), 'time-space compression' (Harvey, 1989b), or 'deterritorialization' (Brenner, 1998), it is the case that state has partly lost its traditional meaning facing the increasingly mobile economic affairs and the consequent 'hollowing-out' impact on the national economy within the boundary of

territorial state due to the formation of new spatial division of labor (NSDL) in the 1970s (Dicken, 2003).

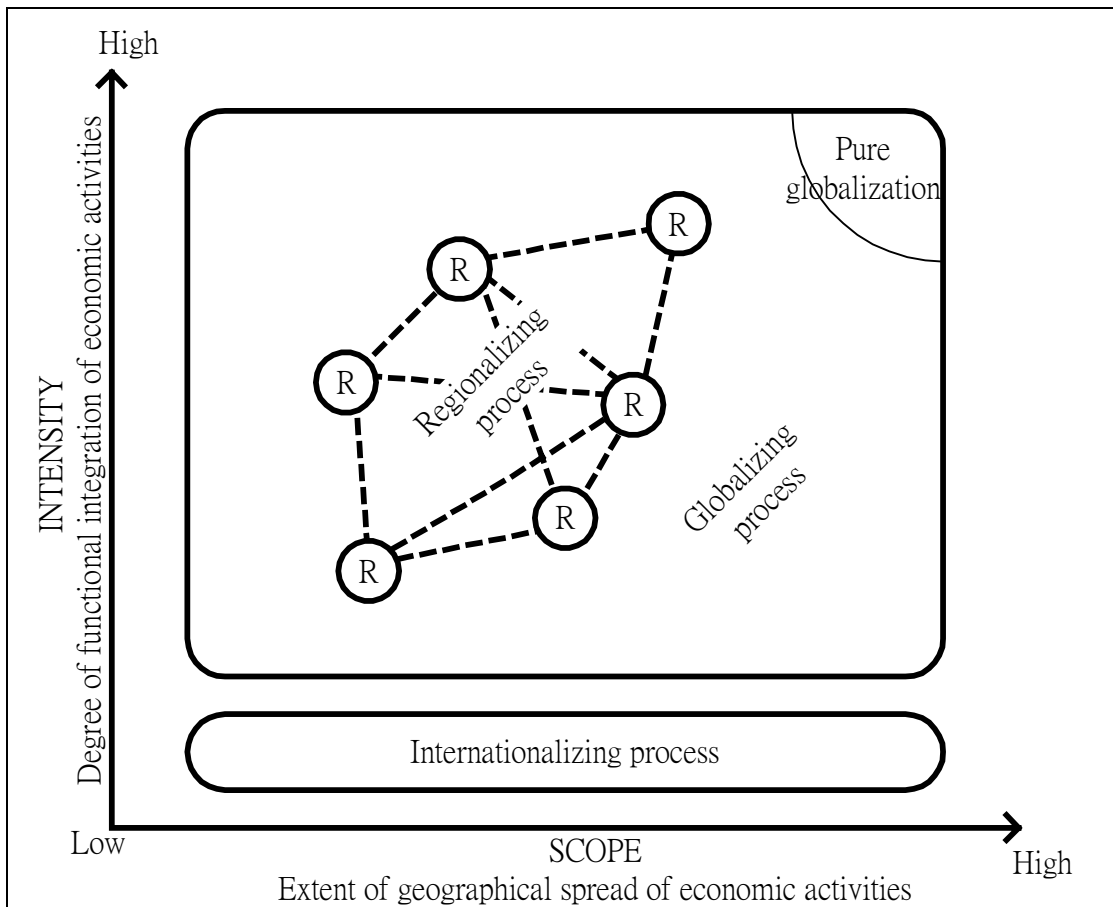


Figure 1. Processes of global economic transformation  
 Source: Dicken, 2003: 13.

As the formation of NSDL and industrial restructuring across the global economic geography, the interactions between cities (and regions) have changed. Because of the differences of locational advantages (e.g. cheaper labor or land cost, affluent natural endowment) and other cultural-institutional elements (intensive knowledge exchange and learning), NSDL differentiates the developmental path of cities or regions. Some cities become the recipients of foreign direct investment (FDI) or traditional manufacturing sectors, and others the exporters of these economic activities (Zhu, 2002).

The circumstance of NSDL creates the possibility of ‘territorial competition’ between cities, meaning that “a process through which groups, acting on behalf of a regional or sub-regional economy, seeks to promote it as a location for economic activity either implicitly or explicitly in competition with other areas” (Cheshire and Gordon, 1996: 385). In other words, regions have become the important arena for economic development across nations and cities striving to seize inflow resources with each other for the socio-economic survival. Each city eager to attract new or to keep existed capitals results in the fierce ‘place wars’ (Haider, 1992) because it may find that it has positioned itself into a more competitive world to ‘*spatially fix*’ the mobile capital across urban, regional, national, and even global scales (Harvey, 1989a). Furthermore, the force of internationalization, especially cross-border regional

integration (e.g. EU), has motivated the intensification of intercity competition. Cities in competition pursue the growth of trade, tourism, and communications under the established long-term trends on the one hand, and finesse the discontinuous shift and shock such as the evolution of EU or the accelerated change in global financial system (e.g. Asian financial Crisis) in the other (Gordon, 1999).

## **2.2 The emergence of urban entrepreneurialism**

The emergence of intercity competition has changed not only the relationship between globalization and urban development, but also the political economy of place for economic regeneration. For example, locality in a given place has played an important role for successful territorial competition. It can provide peculiar locational elements contributing to luring inward investment and other targeted customers beneficial to local economic development. While locality has been largely repackaged as a core element of saleable place for business investment (Logan and Molotch, 1987), it has also been reshaped as the agent to ally cities or communities with various stakeholders with different interest and to consolidate their local alliance and identities (Cox, 1991). Due to the competition for mobile capital is often international and even global scale, the politics of local economic development, in terms of growth coalition/alliance between public and private sectors, may be more globalized 'new urban politics' (NUP) (see Cox, 1995). That is, as the intercity competition is increasingly global-scaled, the local economic governance has to face the geographical broader change and pursue economic assistance from not only local business `elites but also transnational ones (e.g. international banking or property tycoons).

In addition, NUP creates a new way for the dramatic shifts of local governance – from the politics of welfare redistribution to the politics of growth – because the relationship between state and private communities has been reorganized under the logic of NUP (Hall and Hubbard, 1996). It is the transformation that highlights urban managerialism to urban entrepreneurialism. Public-private partnership has become the focus of governing economic issues across varied spatial scales from local to global (Harvey, 1989a). Then, “the line between the private and public sectors has become blurred, and public polices is becoming more reliant on private funding” (Hall and Hubbard, 1996, p.155). Under the ideology of urban entrepreneurialism, the entrepreneurial local state can be defined as “risk-takers and active competitors in the urban economic game. ... The city entrepreneurial role includes...risk-taking, inventiveness, self-reliance, profit motivation, and promotion” (Duckworth et al., 1986; cf. Leitner and Garner, 1993: 59).

## **2.3 Inter-scalar competitive strategies – Ricardian/neoliberal vs. Schmpeterian/ structural perspective**

Intercity competition is the inevitable phenomena accompanied by entrepreneurial governance. According to Harvey (1989a), the flexible regime of capital accumulation during the 1970s propels cities facing the coercive force of competition with others for its economic survival. Moreover, the zero-sum game between cities has made the repetitive and serial reproduction of space for economic competition. “Most local governments have the feeling that they have no option, given the coercive laws of competition, except to keep ahead of game...[and] forget about their strengths and weaknesses and all go for the same type of infrastructure and the same path of development” (Albrechts, 1992: 199). Actually, despite the entrepreneurial

governance has become the panacea to alleviate local recession, Harvey (1989a) also argues that the highly speculative nature is generated from the ephemeral spatial fix for the mobile private capital and that urban area becomes a speculative arena where over-accumulation and over-investment occur.

As a result, urban entrepreneurialism, underpinned by the neoliberal discourse, has incurred several critics due to its governance dilemma since the late 1980s. The most seen critic is that lack of public responsibility and social goals for redistribution makes the entrepreneurial city hard to handle the issues about social justice and basic needs for underclass. Besides, zero-sum competition tends to make municipalities concede private capital favored packages for the speculative investment. Furthermore, the entrepreneurial landscape also actively creates cultural uniformity because of the reproduction of resemble city image such as convention centers, festival markets, cultural and entertainment centers, post-modern shopping malls, and science parks repetitively duplicated over the advanced world (see Wilson, 1995; also see Harvey, 1989a; Albrechts, 1992).

**Table 1. The comparison of entrepreneurship at firm and city levels**

Schumpeter's entrepreneurial firm	Jessop and Sum's entrepreneurial city
New goods	New urban space
New methods of production	New methods of space production
New markets for sales	New markets of urban living
New sources of materials	New sources of supply (funds)
New forms of production organization	Redefining the urban position

Source: Wu, 2003: 1676.

In contrast with the neoliberal competitive strategies, structural/systemic strategies, specific but indicative competitive ones, are initiated by Jessop and Sum (2000) to govern the entrepreneurial cities applying the Schumpeterian concept about entrepreneurship (table 1). The former, based on the *Ricardian* neoliberal economy, just highlights the cost-cutting and deregulatory strategies to attract inward investment. Its strategies are associated with static comparative advantages in economic terms and indifferent to scalar articulation. The latter, based on the Schumpeterian approach, stresses that not only economic but also extra-economic factors (e.g. organizational culture, public institutions, or administrative systems) are the preconditions contributing to successful competition. That's why the entrepreneurial city in Schumpeterian term can be defined as "a city that pursues entrepreneurial *strategies* in an entrepreneurial *discourse* or *fashion* through promoting entrepreneurial *images*" (Wu, 2003: 1675). Therefore, cities can be taken as entrepreneurial entities with active engagement in achieving scalar division and articulation. The structural/systemic strategies are the stronger ones because the approach helps cities to create their own place-based competitive advantages (i.e. local differences) instead of repetitive and homogenized reproduction of appealing spaces resulting in zero-sum game (Jessop and Sum, 2000). The approach is also crucial for a post-industrial city to generate stronger diversity required for sustainable economic growth and to regularly examine and aptly reposition itself on a complex temporal-spatial horizon. When cities inevitably facing the pressure of intercity competition, Schumpeterian entrepreneurial city destructively creates an alternative pathway to construct a competitive but strong and sound built environment.



### **3. The industrial land use system and the restructuring of industrial space in Pei-Pei-Kee Metro Triangle**

#### **3.1 The fragmentary industrial land use system**

In Taiwan, industrial land can be divided into three major categories depending on the authority responsible for the land use and management. One is the industrial zone designated by the Ministry of Interior (MOI). It can be subdivided into industrial zone in urban area (IZ-UA) and Type-D building lands (TDBL) in non-urban area. Another is the industrial district designated by the Ministry of Economic Affairs (MOEA). It can also be subdivided into two types – industrial zone designated by Industrial Development Bureau (IZ-IDB) and export processing zone (EPZ). The other is the science park charged by National Science Council (NSC) (see Fig. 2)

Because the categories of industrial land are divergent and the respective legal foundation is different, it is difficult to manage the industrial land use in a unified system. In general, IZ-UAs and TDBLs, after designated and approved by MOI, are mainly managed by local governments in Taiwan and regulated by the rigid zoning ordinance which is hard to flexibly adjust its allowable land use items in accord with socio-economic transformation. By contrast, IZ-IBDs, EPZs, and science parks have specific authorities in central state and share favored incentives and packages respectively coffered by the ‘*Statute on Encouraging Industry to Up-grade*’, ‘*Statute for the Establishment and Administration of Export Processing Zone*’, and ‘*Act for Establishment and Administration for Science Parks*’. The difference between them implicates that the latter two categories (i.e. designated by MOEA and NSC) of industrial land use are more appealing to the high-tech, knowledge-based, or skill-intensive firms to cluster as well as easier to acquire systematic resource for park maintenance and management. Conversely, the former category in the local urban and non-urban areas usually lacks sufficient funding and efficient central support to expand its redevelopment and, facing the challenge of deindustrialization, to upgrade its entire landscape from distressed ‘brownfield’ to knowledge-based ‘technopole’.

#### **3.2 The post-industrialization in Pei-Pei-Kee and its land use crisis**

In the Greater Taipei metropolitan (Pei-Pei-Kee, PPK), the cross-city/county metropolitan area covers three major local municipalities – *Taipei City*, *Taipei County*, and *Keelung City*. Because of its spatial agglomeration in terms of politics, economy, culture, and information, it is also the core region in the most significant mega-urban region, Northern Taiwan urban-region, in Taiwan. According to table 2, it is significant to observe that Taipei County shares the largest area of all kinds of industrial lands among the three municipalities. Simultaneously, the IZ-UA shares the largest area among all kinds of industrial lands in PPK. As a result, its planning and management of industrial lands has become the important issue to effectively govern PPK industrial spatial policy when the industrial structure of metropolitan was transformed towards post-industrial city-region (see Lin and Liu, 2004). Relying on the command and control function concentrating on the potential world city Taipei (city), the industrial network spreading on the rest of Northern Taiwan urban-region is reorganized and directly linked to the logistic headquarters in Taipei City (ibid 2004).

However, PPK has been facing the trend of de-industrialization since the late 1980s despite there are many industrial zones in the metropolitan area. During the period of

1950-80s, a number of industrial zones were designated to support the accumulation of manufacturing capital under the ideologies of developmental state. Through the pathway of state economic development, active state intervention in the spatial economic policies was the typical measure promoting state economic growth. Consequently, urbanization was accompanied to the rapid industrial projects following the path-evolution from import-substitutive to export-oriented industrialization. Then the considerable and various industrial zones were developed to support the collective production of fixing manufacturing capital (Chou, 1998). The two-way process between urbanization and industrialization determined the spatial formation of industrial zones in/around Taipei City. That's why Taipei was an important 'basing-point' in the 1970-80s world city system (Friedmann, 1986) because of the position of gateway articulating NSDL and the pivot of domestic political and administrative systems (see Wang, 2003).

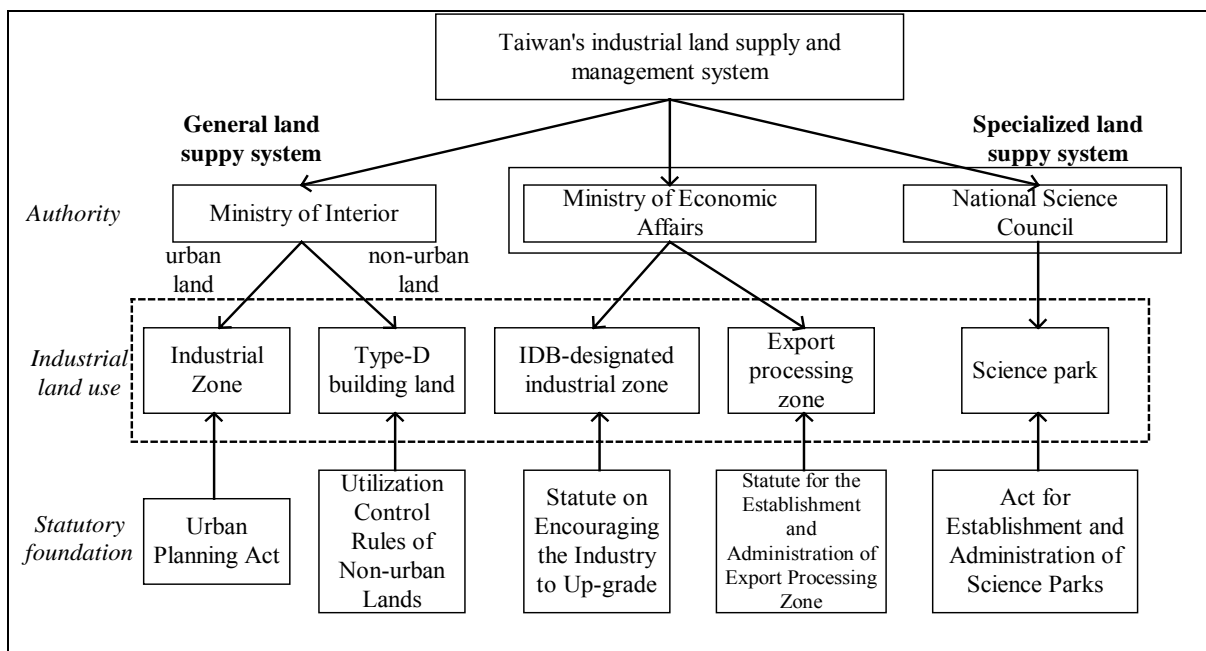


Figure 2. Taiwan's industrial land supply and management system  
Source: revised from Shen, 2005: 2-10.

Table 2. The statistic for the area of industrial lands in Pei-Pei-Kee Metropolitan (Year: 2006)

City/County	Industrial zones designated by IDB		Export processing zones	Science park	Industrial zones in urban area	Type D building lands
	Government-developed	Private-developed				
	Area	Area	Area	Area	Area	Area
Taipei City	8.00	0.00	0.00	0.00	452.51	0.00
Taipei County	341.32	123.00	0.00	0.00	2690.73	616.44
Keelung City	30.00	0.00	0.00	0.00	562.28	15.66
Total	379.32	123.00	0.00	0.00	3705.52	632.10

Source: The website of Taiwan industrial land supply and information, IDB, MOEA <http://idbpark.moeaidb.gov.tw/>

However, the late 1980s is not only the high peak of industrial urban development in PPK, but also the watershed of post-industrial restructuring. Since the reform and open-door policy in 1979, the rise of costal cities in Mainland China has threatened the manufacturing base in Taiwan. After the Martial Law was released by the Kuo-Ming-Tang (KMT) regime in the late 1980s, Taiwanese investment to Mainland China was set off and the investment boom has been increasing year by year. The physical cross-strait flows have to be transferred by means of “the third place” (mainly Hong Kong) due to the three-links (i.e. directly cross-strait linkages of post, shipment, and business) are still not opened by Taiwan government (see table 3).

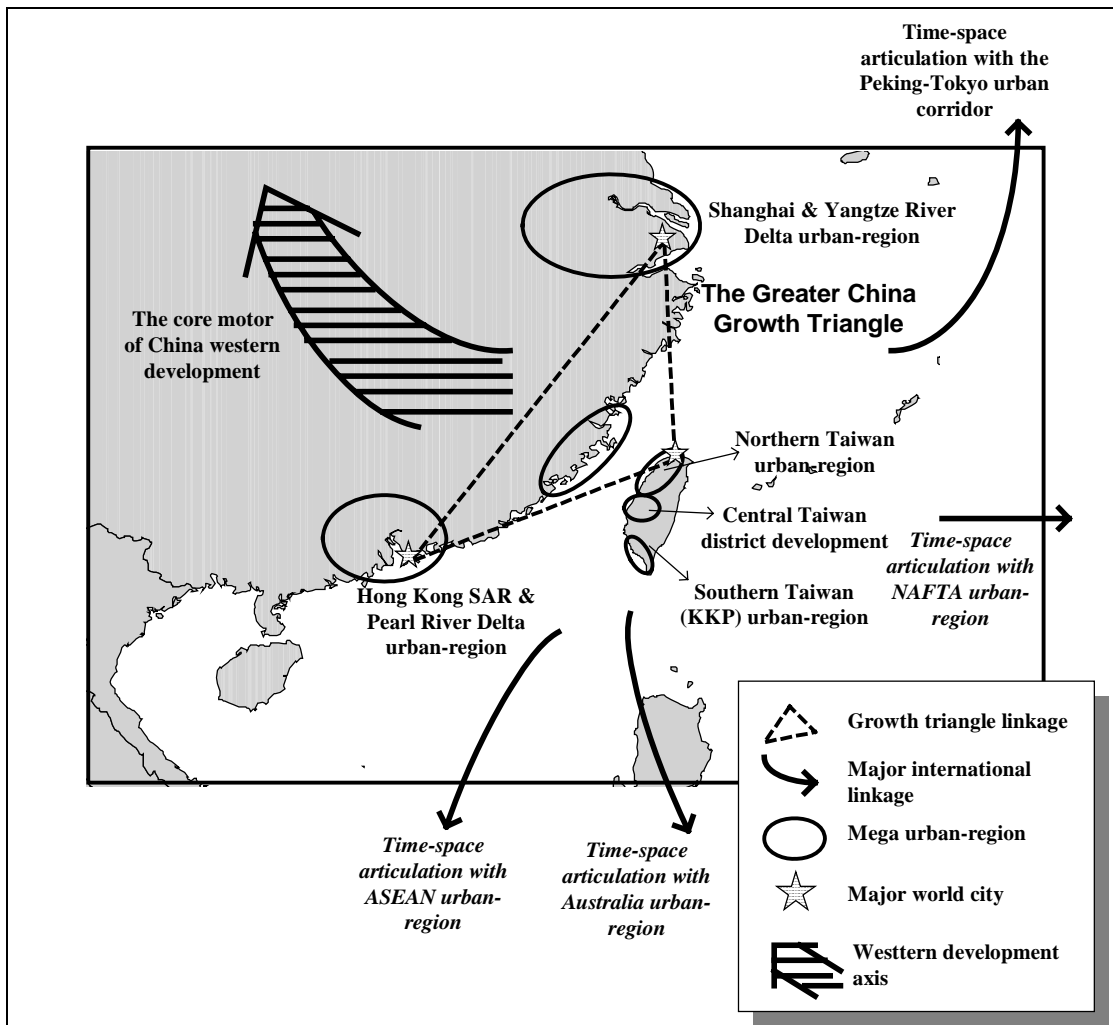


Figure 3. The geo-position of Greater China intercity network  
Source: Lan and Lee, 2007: 89.

Recognizing the impact of economic globalization and the varied path of world city formation in Pacific-Asia, Lo and Marcotullio (2000) argued that Taipei, like Tokyo and Seoul, plays the role of capital exporter in the functional urban system in Pacific-Asia. Its functional restructuring symbolizes the emergence of post-industrial Taipei which can be observed in the recent transformation of industrial structure in table 4. While Taipei has gradually become the exporter of cross-border investment in Taiwan (Wang, 1997), emerging mainland costal cities such as Shanghai and Shenzhen have evolved as the main sites of FDI and the industrial cities in China since 1990s. Simultaneously, Hong Kong, positioning itself as the entrepôt in Pacific Asia, has

actively functioned its role of borderless city and coordinated the subtle geopolitical economic relationships between cross-strait geography (Lo and Marcotullio, 2000) (Fig. 3). Therefore, the highly conceptualized community of ‘Greater China’ was established on the spatial division of intercity network among Taipei, Hong Kong, and Shanghai to refix, retime, and rearticulate the time-space horizon by means of cultural, linguistic, and ethnic conformity (Sum, 2002).

Table 3. The cross-strait trade transferred through Hong Kong  
(Unit: US\$ million; %)

Year	Transfer trade		Transfer export		Transfer import		Trade	
	\$	Growth rate	\$	Growth rate	\$	Growth rate	\$	Growth rate
1996	11,300.0	-1.4	9,717.6	-1.7	1,582.4	0.5	8,135.2	-2.1
1997	11,458.9	1.4	9,715.1	0.0	1,743.8	10.2	7,971.3	-2.0
1998	10,019.0	-12.6	8,364.1	-13.9	1,654.9	-5.1	6,709.2	-15.8
1999	9,803.0	-2.2	8,174.9	-2.3	1,628.1	-1.6	6,546.8	-2.4
2000	11,573.6	18.1	9,593.1	17.3	1,980.5	21.6	7,612.6	16.3
2001	10,504.8	-9.2	8,811.5	-8.1	1,693.3	-14.5	7,118.2	-6.5
2002	12,019.9	14.4	10,311.8	17.0	1,708.1	0.9	8,603.7	20.9
2003	13,950.4	16.1	11,789.4	14.3	2,161.1	26.5	9,628.3	11.9
2004	17,247.3	23.6	14,761.9	25.2	2,485.4	15.0	12,276.4	27.5
2005	19,690.4	14.2	17,055.9	15.5	2,634.5	6.0	14,421.4	17.5
2006	21,617.1	9.8	18,707.2	9.7	2,909.9	10.5	15,797.3	9.5

Source: The website of Bureau of Foreign Trade, ROC: <http://cweb.trade.gov.tw/>

In table 4, it is easy to observe that Taiwan has become a post-industrialized society and the trend is especially significant in each local municipality of PPK. Among the three municipalities, Taipei City occupies the least share of secondary industry and Taipei County the most. The phenomenon reflects the tendency that Taipei County still partly plays a fundamental role in managing industrial zones even the tertiary industry predominates the major contribution of employments in PPK.

Table 4. The recent transformation of industrial structure in Pei-Pei-Kee

Area	Year	The share of employment population depending on the industries							
		Total		Primary industry		Secondary industry		Tertiary industry	
		population (thousand persons)	%	population (thousand persons)	%	population (thousand persons)	%	population (thousand persons)	%
Taiwan	2001	9384	100	707	7.5	3377	36.0	5300	56.5
	2002	9455	100	709	7.5	3334	35.3	5412	57.2
	2003	9573	100	696	7.3	3334	34.8	5543	57.9
	2004	9768	100	642	6.6	3446	35.2	5698	58.2
	2005	9942	100	591	6.0	3558	35.8	5793	58.3
North region	2001	4084	100	72	1.8	1477	36.2	2535	62.1
	2002	4112	100	68	1.7	1448	35.2	2596	63.1
	2003	4163	100	67	1.6	1450	34.8	2646	63.6
	2004	4276	100	61	1.4	1485	34.7	2731	63.9
	2005	4356	100	55	1.3	1518	34.9	2783	63.9
Taipei City	2001	1110	100	4	0.4	225	20.3	<b>881</b>	<b>79.4</b>
	2002	1116	100	4	0.4	221	19.8	<b>891</b>	<b>79.8</b>
	2003	1120	100	5	0.4	218	19.5	<b>897</b>	<b>80.1</b>
	2004	1134	100	3	0.3	219	19.3	<b>912</b>	<b>80.5</b>
	2005	1135	100	2	0.2	219	19.3	<b>914</b>	<b>80.5</b>
Keelung City	2001	161	100	1	0.6	45	28.0	115	71.4
	2002	158	100	1	0.6	42	26.6	115	72.8
	2003	164	100	1	0.6	43	26.2	120	73.2
	2004	170	100	1	0.5	49	28.8	120	70.6
	2005	169	100	1	0.6	47	28.1	121	71.3

<i>Taipei County</i>	<b>2001</b>	1543	100	13	0.8	<b>612 39.7</b>	918	59.5
	<b>2002</b>	1562	100	12	0.8	<b>597 38.2</b>	953	61.0
	<b>2003</b>	1578	100	14	0.9	<b>597 37.8</b>	967	61.3
	<b>2004</b>	1628	100	14	0.8	<b>614 37.7</b>	1000	61.4
	<b>2005</b>	1664	100	12	0.7	<b>629 37.8</b>	1023	56.3

Source: Council for Economic Planning and Development (CEPD), 2006.

Moreover, the trend of deindustrialization can also be found from the shifting amount of turnover with respect to the number of import/export and total containers calculated by TEU's (table 5 and Fig. 4). Keelung Port, an important gateway of logistics in northern Taiwan, has lost its physical amount of export goods and cargos since 1994, and its world ranking has plummeted during the last three years in terms of the number of containers by TEU's. Compared to the world-class ports, Keelung port is hard to maintain its economies of scale and to compete with the TOP10 international ports for the world turnover of cargos. Therefore, the number of manufacturing products exporting to world market is declining because of the atrophied manufacturing sector. The polycentric, post-industrializing city-region has been formed in the mid-1990s and it causes the problems of abandoned industrial tracts and individually application for transforming the land use from manufacturing to other non-industrial.

Table 5. The container (by TEU's) comparison of Keelung Port with the TOP10 ports in the world

Rank	Port City	Country	Containers (TEU)	
			2004	2005
1.	Singapore	Singapore	21,329,100	23,192,200
2.	Hong Kong	China	21,984,000	22,602,000
3.	Shanghai	China	14,554,100	18,084,000
4.	Shenzhen	China	13,659,000	16,196,700
5.	Busan	South Korea	11,491,968	11,843,151
6.	Kaohsiung	Taiwan	9,714,115	9,471,056
7.	Rotterdam	Netherlands	8,291,994	9,286,756
8.	Hamburg	Germany	7,003,479	8,087,545
9.	Dubai	UAE	6,428,883	7,619,000
10.	Los Angeles	USA	7,321,440	7,484,624
<b>30 ↓</b>	<b>Keelung</b>	<b>Taiwan</b>	<b>2,091,458</b>	<b>2,128,815</b>

Source: 1. The website of GoHive: [http://www.xist.org/charts/ec\\_seaport2.aspx](http://www.xist.org/charts/ec_seaport2.aspx)  
2. The website of Keelung Harbor Bureau <http://www.klhb.gov.tw/klhbHome.aspx>

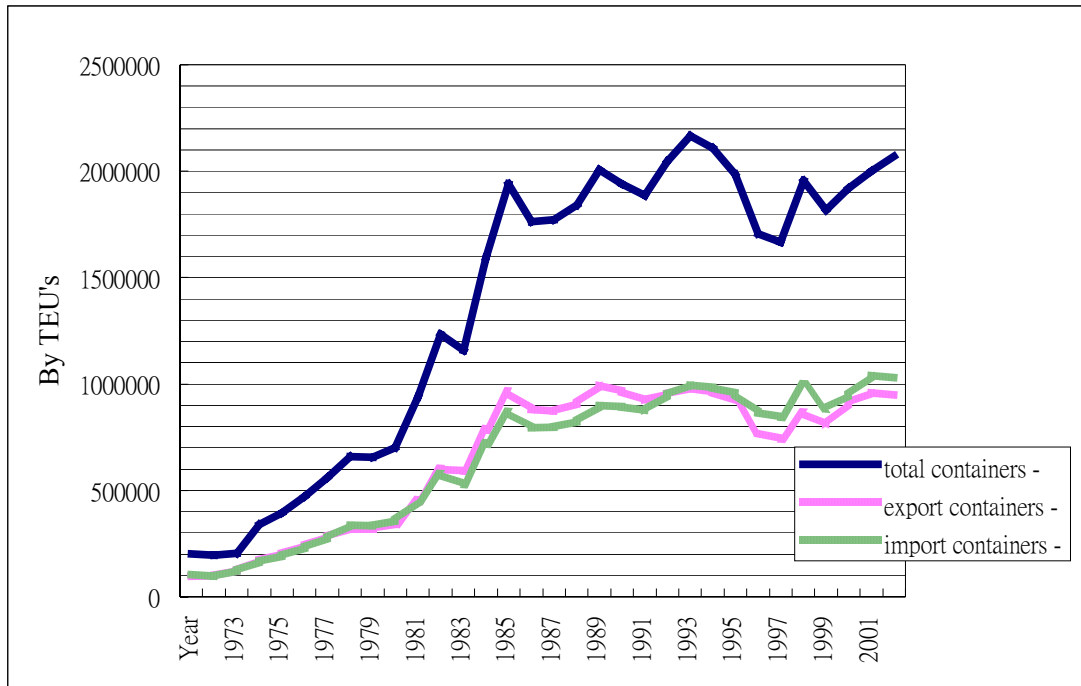


Figure 4. The annual growth rate of the number of containers in Keelung Port (Unit: by TEUs)

Source: Institute of Transportation, Ministry of Transportation and Communication (MOTC), 1972~2004.

#### 4. Restructuring the industrial land redevelopment in PPKMT – towards a Schumpeterian entrepreneurial regional governance

Even the effect of post-industrialization has occurred in PPK, industrial spaces still matters because the strong urban competitiveness has to be built not on the privileged packages for repetitive investment, but on the diverse and featured urban space displaying local difference. In other words, the existed distressed industrial zones just provide possible and strategic sites for creating new and innovative urban spaces. However, how to regenerate these brownfields is the prerequisite to practiced entrepreneurial PPK in terms of Schumpeterian approach. Rather than cost-cutting strategies, structural competitive strategies have to be rooted in governing industrial land use in and even beyond the metropolitan scale. Following the governance of entrepreneurial city in terms of Schumpeterian approach (see table 1; also see Jessop and Sum, 2000: 2289-2290), five fundamental directions based on Schumpeterian approach are critical for PPK to reconsider:

##### 4.1 New urban space

Firstly, *the relaxation of land use items in the industrial zones*, especially the industrial zones in urban areas and Type-D building lands in non-urban areas, has to be carried out to promote the redevelopment towards *new urban space*. Compared to the specialized industrial districts such as IDB-designated industrial zones, export-processing zones, and science parks, the regulation of industrial land use in Taiwan's urban plan and non-urban land use control is stricter and often lacks profitable packages favoring new industrial activities. For example, although the land use items of industrial zone in urban areas have aptly relaxed to introduce some part of new activities into industrial land, the redevelopment of industrial zones in urban areas is often restricted because the comprehensive review of urban plan is merely

implemented in every three to five years. Moreover, the individual change is not allowed unless matching major economic development or facing major accidents (see Article 26 & 27, Urban Plan Act) (Shen, 2005).

Facing the pressure of hollowing-out of traditional manufacturing sector, the transformation from industrial land use to other higher valued, non-industrial use or the abandonment of distressed factories also exacerbates the decay of industrial space. As the post-industrialized city-region has formed in PPK, the industrial boundary has become blurred and the new industrial 'complexes' have increasingly emerged. The rigid land use regulation in zoning system is unfavorable to actively upgrade traditional industrial zones in PPK or instantaneously adjust land use items in accord with the market dynamic.

#### **4.2 New methods of space production**

Secondly, *the mechanism of regenerating industrial spaces* should be established to provide a new institution catalyzing *the production of new urban space*. Not only relaxing land use items but also creating a systematic mechanism of industrial regeneration is important to the strong urban industrial competitiveness. Although the Urban Renewal Act has been enforced to charge with the projects of urban redevelopment since 1999, the major subject applying to the Act is physical redevelopment in residential sites (Lin et al., 2006). However, the focus of industrial land redevelopment is mainly on the economic revitalization and cultural preservation, so lack of an effective institution to support the regeneration of industrial land is a serious problem to be solved in PPK because the industrial zones in urban areas are in the majority of all kinds of industrial districts in the metropolitan.

In addition, according to fig. 2, the asymmetric institutional infrastructure about subsidy and incentive between general and specialized industrial land supply systems shows the problem that lack of unified management and holistic redevelopment of industrial space cannot provide sufficient niches for private capitals to relocate in the general industrial spaces. High-tech and knowledge-based industries still tend to be located in specialized industrial zones to enjoy the benefits offered by MOEA or NSC. The undeveloped or abandoned tracts in the general one are not appealing to the filling-in of new, high value-added industrial activities instead of the leaving of labor-intensive industries.

#### **4.3 New markets of urban living**

Thirdly, *the spatial division of industrial policy* among the three local states is a critical issue to rediscover *the new markets for urban living* in the regional scale. Despite PPK is relative smaller in terms of areas and populations than the standard mega-urban regions in Pacific-Asia (see Douglass, 2000), the three individual municipalities can be integrated into a geographically complementary spatial sphere.

Traditional governance form based on Ricardian entrepreneurial city always generates similar redevelopment project and replicated investment among different cities and even causes weak, zero-sum competition (Albrecht, 1992). Conversely, the redevelopment of industrial zones has to be integrated in the regional scale in order to prevent these municipalities from inefficient investment and internally vicious contestation. That's why the spatial division of urban industrial advantage is the first priority to create strong competitiveness to the metro economy in PPK. As a result, it



generates the requirement of promoting the cross-border governance among these municipalities to achieve the collective competition and reciprocal complementation.

However, the comprehensive redevelopment of industrial land use across municipal jurisdiction has been seldom scrutinized in the existed issues about city cooperation even the regime of cross-border governance in northern Taiwan urban-region has been enforced since late 2003. Actually, Taipei City has exhibited its dominant function of command and control over Taiwan and has performed itself as the interface city coordinating the capital flow in/out Greater China (Hsu, 2005) while Taipei County has gradually promoted the clustering of high-tech industries alongside the corridors of Zhong-Shan and Northern Second Highways and Keelung City enjoys the gateway advantage brought by Keelung Port Free Trade Zone. The local differences among three cities facilitate the formation of place marketing and branding as well as the cooperative governance of industrial land redevelopment.

#### **4.4 New source of supply for funding the production of space**

Fourthly, in order to open the *new source of supply* for creating new urban space, the limits of stricter monetary regulation and cross-strait flows should be opened *to reduce the institutional barrier detrimental to attracting the cross-border agents* revitalizing market of industrial property. Although the built environment is relatively fixed, each building physically embodies a considerable investment of capital and labor power. From the perspective of property development, the 'industry' needs an assemblage of different types of capital, interests, and functions. That is, there are several private agents in property markets, including at least developers, landowners, financiers, building contractors, long-term investors, and tenants, which can bring about various capitals (i.e. commercial, landed, financial, industrial, and investment capitals) required for the industrial land redevelopment (Maclaran, 2003).

Funding is an indispensable element for the successful regeneration of old industrial zones because it can provide the source of driving the production of new urban space. Facing the intercity competition driven by the aforementioned new urban politics, the main catalyst for urban regeneration is not only the private capital embedded in local community but also the transnational capital rescaled from cross-border regions (Hall and Hubbard, 1996). However, the political tension between mainland and Taiwan hinders PPK from the direct articulation with the markets in China. The restricted openness reduces the possibility of Taipei's further world city formation after the mid 1990s. It also depresses the attraction of varied foreign agents to invest the business of urban redevelopment (including industrial revitalization) in PPK.

#### **4.5 Redefining the urban position**

The last but not the least, associated with the spatial division of industrial policy and the attraction to foreign agents, *the reposition of PPK as a reflexive metro triangle in the Greater China intercity network* provides an opportunity to *redefine its position of new industrial space* in a wider time-space horizon under the spatial division of geoeconomy locating in Greater China. However, the greatest challenge is the hindered geo-openness of PPK in the competition of Greater China intercity network. Not only Hong Kong has actively remade itself as a competitive entrepreneurial city since the return to China in 1997, but also Shanghai has been eager to promote its entrepreneurial landscape to advance its status in the global city system (see Jessop and Sum, 2000; Wu, 2003).

The delicate competitive and complement relationship has integrated the three major cities in Greater China – Taipei, Hong Kong, and Shanghai (see Fig. 3). They are interlocked by the transnational production of global network system (Kwok and Hsu, 2005). The cluster of technological innovation in Taiwan, the financial center and the advanced business services in Hong Kong, and the manufacturing base in Shanghai (with its hinterland – Yangtze River Delta) have rearranged the spatial division of labor in Greater China (Sum, 2002). Moreover, the increasing land and labor costs as well as environmental concerns have forced the export-oriented factories in Taiwan to move towards Southeast Asia latecomers and China. Among them, China has become the largest recipient country of Taiwanese investment and the largest overseas manufacturing base due to the strategic attraction of local states in China and the cultural, kinship, and linguistic affinity (Chou and Lin, 2007). Despite the seemingly complement and coordinative spatial division of labor, the relationship among the three major cities in Greater China is unstable owing to the geopolitical tension and the investment competition for the top regional commanding post (Kwok and Hsu, 2005).

Facing the pressure of intercity competition, caused by the three cities (with their adjoining urban-regions), an expressive and definitive urban (-regional) position is important for PPK to boost the industrial regeneration and regional development and to reduce the risk of repetitive investment in the redevelopment projects. However, the main institutional barrier to the self-positioning of PPK is that the lack of institutional infrastructure such as the three links is hard to attract advanced industries associated with the industrial chains in China to infill the abandoned industrial spaces in PPK. In addition, the cross-strait political tension continuously affects more or less the stability of property market (especially in terms of stock and prices) in PPK (Chang and Lin, 1999) and the functional flows of international economic, cultural, and social linkages because of the struggle of ‘identity politics’ (Ching, 2005). Furthermore, the cross-strait economic relationship is asymmetric because the cross-border investment from China to Taiwan is prohibited by Taiwan government worrying about the economic stability (Chou, 2007). Due to these geopolitical factors impeding the openness of Taipei, PPK, and even northern Taiwan urban-region, Taipei’s pathway formatting world/global cities is ambiguous (Wang, 2004) and the northern Taiwan urban-region is difficult to remake itself as a competitive global city-region (Lan and Lee, 2007). The time-space barrier of interscalar articulation has caused the ‘*spatial de-fix*’ for advanced industries to infill the new urban space in PPK. Regionalization strategies to create the time-space articulation will be the emergent industrial land use policy waiting to be engineered.

## **5. Concluding remarks**

As the main places to accumulate industrial capital required for pathway of Taiwanese developmental state, the industrial spaces in PPK were largely designated to support Taiwan’s state economic projects during the 1960-80s. However, the hollowing-out effect of traditional and electronic industries has occurred since the late 1980s because of the increase of domestic production cost and the rise of coastal cities in China after its open-door policy. The ever-prosperous industrial land parcels have either become abandoned brownfields or seek for transformation to other non-industrial uses (e.g. commerce and residence). As a result, regenerating these old industrial zones has been an important issue to maintain PPK’s industrial competitiveness in Greater China

intercity network and even Pacific-Asian one. It is a serious trial for the metro triangle about their restructuring of industrial land use policy in the urban-regional scale.

Through the perspective of governing Schumpeterian entrepreneurial city, the paper tries to explore the critical issues for the policy-making of industrial land according to five entrepreneurial directions of Schumpeterian discourse – new urban space, new way producing urban space, new market of urban living, new source of supply, and urban reposition. By means of the exploration, the paper argues that there are some governance dilemmas waiting to be improved in the future. First, the rigid zoning system cannot create flexible adjustment meeting the demand of emerging and advanced industrial complex, so the new urban space may not be effectively produced in accord with market dynamic.

Second, the specialized and general industrial land supply systems have caused the fragmentation of land use management and the municipalities in PPK lack integrated platform to supervise the metropolitan industrial land use and make cross city-county boundary industrial redevelopment

Third, definite spatial division of labor is an important instrument for PPK to establish the respective targeted markets and urban images to consolidate the complement and industrial synergy in the metropolitan area. It also helps prevent public sectors from investing repetitive resource or pursuing overlapping, un-coordinative projects to regenerate industrial zones.

Forth, the institutional barrier such as the limits of three links cross strait and the prohibition against the industrial investment from mainland to Taiwan is detrimental to attract the source of upgrading outdated industrial zones and funding the infill of advanced industrial complex. Although the promotion of open and fluid industrial climate has been an old suggestion since 1990s, the policy is still waiting to be practiced.

Fifth, PPK has to reflex itself find a way out of the bounded position. The blurred position is more or less inculcated in the long-lasting political tension cross strait, but the lack of institutional infrastructure supporting by public sectors (including central and local states) also cannot provide sufficient strategic assistance to regionalized PPK's industrial spaces. Central and local states, despite their political contestation based on 'identity politics', cannot evade the responsibility of actively reterritorializing the economic spaces in terms of reflexive regionalization in Greater China. How to reposition the industrial spaces of PPK with not only significant local advantages but also strong time-space articulation is the main strategic direction in the future.

Despite the leaving-out of traditional manufacturing sector is the inevitable trend of the NSDL in the context of globalization and the political tension does impede Taiwan's economic openness of cross-border industrial network in Greater China, the central state and the municipalities in PPK still have to take measures to create innovative, dynamic, regionalized, and competitive industrial landscape by means of entrepreneurial strategies with entrepreneurial discourses to practice entrepreneurial images. Therefore, the regime of entrepreneurial regional governance in terms of Schumpeterian approach should be stirred up, planned, promoted, and implemented to

alleviate the economic recession, to intensify existed industrial clusters, to regenerate the old industrial brownfields towards strong industrial complex as well as to reposition these industrial spaces as the reflexive wealth engine with structured urban competitiveness.

## 6. References

- Albrechts, L., 1992, New challenges for urban policy under a flexible regime of accumulation. *Landscape and Urban Planning*, **22**, 189-203.
- Brenner, N., 1999, Globalisation as reterritorialisation: the rescaling of urban governance in the European Union. *Urban Studies*, **36(3)**, 431-451.
- Castells, M., 1989, *The Informational City: Information Technology, Economic Restructuring and the Urban-Regional Process* (Oxford: Blackwell).
- Chang, C-O., and Lin C-Y., 1999, Taipei. In James Barry and Stanley McGreal (Eds.), *Cities in the Pacific Rim: Planning Systems and Property Markets* (London: E & FN Spon), pp.89-106.
- Ching, C-H., 2005, The development of economic structure: producer services and growth constraints. In R. Y-W. Kowk (Ed.), *Globalizing Taipei: The Political Economy of Spatial Development* (N. Y.: Routledge), pp.35-54.
- Cheshire, P. C., and Gordon, I. R., 1996, Territorial competition and the predictability of collective (in)action. *International Journal of Urban and Regional Research*, **20**, 383-399.
- Council for Economic Planning and Development (CEPD), 2006, Urban and Regional Development Statistics (Taipei: CEPD).
- Cox, K. R., 1995, Globalisation, competition and the politics of local economic development. *Urban Studies*, **32(2)**, 213-224.
- Cox, K. R., and Mair, A., 1991, From localized social structures to localities as agents. *Environment and Planning A*, **23**, 197-213.
- Chou, T-L., 1998, Crisis and dysfunction of spatial development and management in Taiwan, *Environment and Planning C: Government and Policy*, **16**, 69-84.
- Chou, T-L., 2007, Market entry model and governance of industrial property investment across Taiwan Strait. *Journal of Taiwan Land Research*, **10(1)**, 23-52. (in Chinese)
- Chou, T-L., and Lin, Y-C., 2007, Industrial Park Development across the Taiwan Strait. *Urban Studies*, **44(8)**, 1405-1425.
- Dicken, P., 2003, *Global Shift: Reshaping the Global Economic Map in the 21st Century* (London: Sage).
- Douglass, M., 2000, Mega-urban regions and world city formation: globalisation, the economic crisis and urban policy issues in Pacific Asia. *Urban Studies*, **37(12)**, 2315-2335.
- Duckworth, R., Simmons, J. M., and McNulty, R. H., 1986, *The Entrepreneurial American City* (Washington DC: Partners for Livable Places).
- Gordon, I., 1999, Internationalisation and Urban Competition. *Urban Studies*, **36 (5/6)**, 1001-1016.
- Griffiths, R., 1998, Making sameness: place marketing and the new urban entrepreneurialism. In Nick Oatley (Ed.), *Cities, Economic Competition and Urban Policy* (London: Paul Chapman Publishing Ltd), pp. 41-57.
- Haider, D., 1992, Place wars: new realities of the 1990s. *Economic Development Quarterly*, **6**, 127-134.
- Hall, T., and Hubbard, P., 1996, The entrepreneurial city: new urban politics, new urban geographies?, *Progress in Human Geography*. **20(2)**, 153-174.

- Harvey, D., 1989a, From managerialism to entrepreneurialism: the transformation in urban governance in late capitalism. *Geografiska Annaler*, **71B (1)**, 3-17.
- Harvey, D., 1989b, *The Condition of Postmodernity* (Oxford: Blackwell).
- Hsu, J-Y., 2005, A site of transnationalism in the “Ungournded Empire”: Taipei as an interface city in the cross-border business network. *Geoforum*, **36**, 654-666.
- Institute of Transportation., 1972~2004, *The Statistic Data Report of Transportation Research* (Taipei: Ministry of Transportation and Communication).
- Jessop, B., 2002, *The Future of Capitalist State* (London: Polity).
- Jessop, B., and Sum, N-L., 2000, An entrepreneurial city in action: Hong Kong’s emerging strategies in and for interurban competition. *Urban Studies*, **37(12)**, 2287-2313.
- Kowk, R.Y-W., and Hsu, J-Y., 2005, Asia dragons, south China growth triangle, developmental governance and globalizing Taipei. In R.Y-W. Kowk, (Ed.), *Globalizing Taipei: The Political Economy of Spatial Development* (N.Y.: Routledge), pp. 1-15.
- Lan, I-C., and Lee, C-P., 2007, The De-capacitated spatial governance and its temporal-spatial rescaling barrier: the northern Taiwan urban-region and state in the Pacific-Asia geo-political economy. *Journal of Social Science*, **15(1)**, 79-119. (in Chinese)
- Leitner, H., and Garner, M., 1993, The limits of local initiatives: a reassessment of urban entrepreneurialism for urban development. *Urban Geography*, **14 (1)**, 57-77.
- Lin, C-Y., Jiang, T-F., and Lai, B-S., 2006, The comprehensive promotion strategies of redevelopment and regeneration in the industrial parks. In *The 2006 Symposium of Industrial Park Policy and Planning* (Taipei: Industrial Development Board, MOEA), pp. 8-1-8-37. (in Chinese)
- Lin, T-F., and Liu, C-Y., 2004, The new spatial form in the globalizing economy: a historical emergence of the polycentric northern Taiwan metropolitan region. *Journal of Building and Planning National Taiwan University*, **12**, 19-44. (in Chinese)
- Lo, F., and Marcotullio, P. J., 2000, Globalisation and urban transformations in the Asia-Pacific region: a review. *Urban Studies*, **37(1)**, 77-111.
- Logan, J. R. and Molotch, H. L., 1987, *Urban Fortunes – The Political Economy of Place* (Berkley: University of California Press).
- MacLaran, A., 2003, Master of space: the property development sector. In Andrew MacLaran (ed.) *Making Space: Property development and Urban Planning* (London: Arnold), pp.7-62.
- Parkinson, M., 1991, The rise of the entrepreneurial European city: strategic responses to economic changes in the 1980s. *Ekistics*, **350/351**, 299-307.
- Shen, W-E., 2005, *Research of redevelopment Strategies of Urban Industrial Land under Industry Structure Transformation* (Taipei: Unpublished Master Thesis, Department of Real Estate and Built Environment, National Taipei University). (in Chinese)
- Sum, N-L., 2002, Rearticulation of spatial scales and temporal horizons of a cross-border mode of growth: the (re)making of ‘Greater China’. In M. Perkmann and Ngai-Ling Sum (Eds.), *Globalization, Regionalization and Cross-Border Regions* (London: Palgrave), pp.151-175.
- The website of Bureau of Foreign Trade: <http://cweb.trade.gov.tw/>
- The website of GoHive: [http://www.xist.org/charts/ec\\_seaport2.aspx](http://www.xist.org/charts/ec_seaport2.aspx)
- The website of Keelung Harbor Bureau: <http://www.klhb.gov.tw/klhbHome.aspx>

- The website of Taiwan industrial land supply and information, Industrial Development Board, Ministry of Economic Affairs: <http://idbpark.moeaidb.gov.tw/>
- Wang, J-H., 1997, Governance of a cross-border economic region. Taiwan and southern China. *Taiwan: A Radical Quarterly in Social Studies*, **27**, 1-36. (in Chinese)
- Wang, J-H., 2004, World city formation, geopolitics and local political process: Taipei's ambiguous development. *International Journal of Urban and Regional Research*, **28(2)**, 384-400.
- Wilson, P. A., 1995, Embracing locality n local economic development. *Urban Studies*, **32 (4/5)**, 645-658.
- Wu, F., 2003, The (post-) socialist entrepreneurial city as a state project: Shanghai's globalisation in question. *Urban Studies*, **40(9)**, 1673-1698.
- Zhu, J., 2002, Industrial globalisation and its impact on Singapore's industrial landscape. *Habitat International*, **26**, 177-190.

# **Establishing a Credible Land Institution in Transitional Chinese Cities: Shanghai's Practice, Problems and Strategies**

**Yawei CHEN**

Department of Real Estate and Housing  
Faculty of Architecture, TU Delft  
Tel: +31 15 278 1272  
Email: y.chen@tudelft.nl

## **Abstract**

Since China adopted the Open Door Policy and economic reforms in 1978, Chinese cities have undergone a dramatic transformation. A series of land reforms has been implemented in China, resulting in an emerging market mechanism and the diminishing of the traditional allocation system used in the centrally planned economy. As land has become more marketised and commodified, however, there are increasingly indications that land reform strategies have failed to tackle various transitional problems and create credible institutions. There is a risk that the emerging institutions will benefit the wealthy few, rather than the masses. This paper examines the development of an emerging land institution in Shanghai, and analyses the extent to which credibility has been established in the local institutional land system during the last two decades. This paper suggests that, in order to improve the system's credibility, Shanghai needs to address the issue of land justice and social goals. We argue that the state can, and should, play an important role in this process.

**Keywords:** Transition, land reform, credible institution, land justice, Shanghai

## **1. Introduction**

'Land is the essential raw material of all property development projects,' as Syms (2002: 55) once put it. Extensive research in the fields of urban studies, planning, and land policy issues has found that land policy and land development play crucial roles in economic development and urban restructuring (Needham 2003). Land issues involve not only land resources and capital, but also various actors who have direct or indirect links with land resources via land ownership or land-use rights. Therefore, whether land is used in an efficient way, and whether the interests of different parties in land transfers – including economically marginalised ones – are balanced, will influence the speed and outcomes of specific urban (re)development processes.

As China continues with its economic reforms and the Open Door Policy, many Chinese cities have experienced explosive economic growth and dramatic transformations in their urban environments. Shanghai is China's most important economic centre, and has striven to regain its image as China's window to the world. It is also one of the international economic, financial, and trade centres on the west bank of the Pacific Ocean. Shanghai has paid particular attention to improving its urban physical environment and enhancing its attractiveness and competitiveness to business and investors. How to actively and successfully use urban land has become a priority for the local government in formulating urban land policy.

This paper examines how Shanghai has built up its land institutions by means of various land reform measures, and the extent to which these have attained credibility. Following an analysis of urban land reform in the national context, the paper focuses on land reform in Shanghai in terms of both regulations and practice, and analyses the effect that land reform has had on the city's land market and the changing roles played by various actors. We point out that land reform has facilitated participation by market actors and has stimulated the emergence of local land and property markets. However, the fact that a series of pitfalls exists within emerging land institutions also prompts concerns about whether the newly created institutions lack credibility among social actors. The last part of the paper suggests a number of potential strategies to help create trust within emerging land institutions.



Figure 1: Location of Shanghai (Chen 2007)

## 2. Building a credible land institution



As a potential market asset and source of capital, land is central to capitalism. Governments and international agencies therefore always aim to create well-functioning land markets. This is particularly the case for many developing countries that struggle to build the necessary institutions for supporting market activities and creating wealth. Although many questions remain to be answered about how to build land markets, recent research has made significant progress in contributing to our understanding of their evolution (Ho 2005a and 2005b; Ho and Spoor 2006; Steudler *et al* 2004; Wallace and Williamson 2006; Williamson and Wallace 2007). As shown in Table 1, Williamson and Wallace (2007) suggest five stages in the establishment of a country's land market, from the recognition of land to the creation of a complex market. The five evolutionary stages do not represent discrete empirical descriptions of how formal land markets actually evolve, but rather how land administrative systems can be developed to assist the actual and potential economic development of a country.

**Table 1: Simplified characteristics of evolutionary stages of land markets (Williamson and Wallace 2007)**

<b>Stages</b>	<b>Characteristics</b>
1. Land	A group or country establishes a defined location with territorial security. The securing of spatial relationships in land arrangements among competing groups is fundamental to all later developments.
2. Land rights	Within the group, regularities of access create expectations that mature into rights. In formalised systems, these rights are reflected in the legal order. In some of these, the legal order is further embedded in the formal infrastructure of the Land Administrative System (LAS). The crucial element of the participants' cognitive capacity starts with 'my land' and 'not my land,' and matures into everyone appreciating 'your land.' The power derived from land ownership is also managed and restricted via taxation and other systems.
3. Land trading	Virtually at any time during Stage 2, members of the group will develop a process of trading land. The traded rights in land evolve into property, the basic legal and economic institution in formal land markets. As economies become more complex, trading will include strangers and will depend on objective systems of evidence, and eventually on a well-run programme of recording property rights. Inheritance tracking processes will also develop. Commoditisation processes will involve public capacity to view land as offering a wide range of rights, powers and opportunities. The better these are organised and understood, the better the market will operate.
4. Land market	Trading increases in scale and complexity until it develops into a property market. In the latter, rights are converted with ease into tradable commodities. Significant government infrastructure supporting market activities in land stabilises commoditisation and trading. Land is used extensively as security, multiplying opportunities to derive capital. Capacity to invent and market new commodities emerges and gains strength.

5. Complex market	Market stability allows the spontaneous invention of complex and derivative commodities and ‘unbundling’ of land. This involves both imagination and globalisation. Typical Stage-5 machinery includes corporatisation, securitisation and separation. The system relies heavily on the rule of law, government capacity, and national ability to compete for capital in international markets.
-------------------	---

Evolving land markets need a great deal of time, resources and capacity in the form of supporting infrastructure. Nevertheless, strengthening land administration capacity does not always aid the creation and management of a successful land market. This is not only because land markets are highly dependent on their political, economic and social contexts; it is also because the infrastructure that is needed to support a well-functioning land market, such as high-quality planning and diverse sources of financial and human capital, is expensive, and demand for cognitive capacity in beneficiaries and participants is high in land markets. Having examined the evolution of all 227 nations in the world, Williamson and Wallace found that only about 40 could claim to run effective, formal, comprehensive, national land markets, depending on the criteria used. As a result, Williamson and Wallace (2007) conclude:

*Successful formal land markets require institutions organised by governments. Institutions include land registries and cadastres, and, most important, the institution of property. In addition to land administration infrastructure, land markets require well balanced legal systems, dispute management systems and financial systems of international standing. Most successful LAS provide the confidence and public face of land trading that, in turn, support highly geared trading processes that accelerate creation of national wealth.*

For (former) socialist economies, whether in Central and Eastern Europe or in East Asia, the reform of land policy and the establishment of land markets are inevitable and essential components of reform agendas. These are daunting tasks, given that institutions that had been based on allocation must be reoriented towards the recognition of land as a market asset, and well-functioning land markets suited to local conditions need to be established during a process of continuous political and economic transition – a process that has taken some other countries more than two centuries. Indeed, despite their shared recognition of the value of land markets, transition countries have chosen quite divergent paths. The Chinese, for example, ‘have consciously opted to downplay the ex-ownership issue in favour of social stability – even up to the point of deliberately shrouding ownership rights in legal and political ambiguity’ (Ho and Spoor 2006: 585), and have placed land-lease rights at the centre of land policy reform. Central and Eastern European countries, on the other hand, as typified by the Hungarian transition, decided to dismantle rural collectives and return land holdings to their original owners. Nevertheless, both cases demonstrate the important evolutionary stages of recognising land, land rights and the establishment of land markets based on land reform, land titling and institutional changes, as suggested in Figure 1 by Williamson and Wallace (2007).

After two decades of land reform efforts in these transitional countries, questions have been raised as to whether social actors perceive the established institutions to be credible. Ho (2005a: 588; 2005b: 187) warns that the failure to create trust in land

institutions and to undertake effective institutional reforms might jeopardise the social acceptability or credibility of those institutions. In other words, the new institution risks being an ‘empty institution,’ a paper agreement or hollow shell that has little impact – or even a negative impact – on social actors. In order to avoid this latter outcome, Ho advocates that the state should play a significant role in curbing market forces by means of the restriction or prohibition of land sales or rentals, in order to ensure that the emerging market does not result in a rapid concentration of land in the hands of the powerful.

### **3. Land reform in China**

‘Gradualist urban land reform forms an intrinsic part of the incremental economic reforms in transitional China’ (Zhu 1999). The emphasis on social equality in China’s original planned economy has shifted to support the move to establish a land market that takes account of the value of land. Before 1978, under the central planning system, urban land was state-owned and farmland was collectively owned. Land was not considered to be a commodity and therefore had no value. The state decided what, and how much, the dominant state-owned work units (*Danweis* in Chinese) should produce, how much profit they were allowed to keep, and how much urban land they were allowed to acquire for production, expansion and residential use. The allocation of land was then free of charge for an indefinite period, and the Chinese constitution banned land transactions. Meanwhile, collectively-owned land in rural areas was converted to state-owned land by means of land acquisition. If the state acquired land from farmers, farmers received a compensation package that included job opportunities, housing compensation, compensation for the loss of crops, and the granting of urban residency licenses. The latter made farmers eligible for social welfare benefits such as medical insurance, pension and retirement plans, access to higher-quality schools, and subsidised goods that were not previously available to peasants (Ding 2003: 110-111).

The land tenure system that developed during this period (1949-1978) greatly influenced the land-use structure of urban areas, but created a series of land-use problems that were later encountered during the reform era. For example, land-use plans did not discriminate between commercial, residential or industrial functions. Factories and workers’ villages were built side-by-side for reasons of efficiency. The mixture of land use was heightened further due to over-emphasis on industrialisation, as planners converted commercial sites into light industrial functions with little alternation. In Shanghai, more than 4,000 factories were established, taking up a quarter of the centre’s land and becoming the city’s main source of pollution (Wu 1999: 209). Furthermore, because the ownership of allocated land was ambiguous, the land acquired under the old regime could not be put in the emerging land market immediately due to the complex struggle of interests between local government, developers, work units and individual households. It became a strong barrier to the development of a mature land market.

Following the introduction of the Open Door Policy, China adopted a land-use rights tenure system similar to the leasehold tenure system used in western countries, which separates land from buildings or improvements. In 1980, the State Council drafted its first regulation on construction land used by a Chinese joint venture with a foreign party, in which the charging of a land-use fee was mentioned for the first time. The *People’s Republic of China Land Administrative Law*, passed in 1986 and amended in

1998, legalised the accessing of state-owned land by private organisations. It was not until April 1988, however, that China's Constitution was amended to permit the transfer of land-use rights from the state for a designated period of time (Ding 2003: 113). According to the *People's Republic of China Assignment and Transfer of Use Rights of State Owned Land in Urban Areas Temporary Regulation* (1990), land-use rights are being commercialised. Having established the legal framework for China's urban land-use rights reform, the State Council issued the *Provisional Regulation on the Granting and Transferring of the Land Rights over State-owned Land in Cities and Towns* in 1991. This provided concrete legal guidance for land users to let, transfer, rent, and mortgage land-use rights (Ding 2003). China does not intend to create a capitalist land market with full ownership rights, but rather intends to separate use and management from ownership; indeed, state ownership remains a key priority during the commercialisation of land-use rights. 'Given the characteristics of the Chinese land tenure system, private land ownership does not exist in China' (Chan 2003: 138). The primary rationale behind this and subsequent reforms has been to attract foreign investment in property, and to restructure the land supply- and land allocation systems so as to enhance economic efficiency (Olds 2001: 173). These basic principles have had important consequences for later land development.

Like most of the reform-era Chinese laws that borrow extensively from Western legal doctrines, concepts, procedures, and terminology (Guthrie 1999: 127; Pei 1997: 76), the new land policy was based on other countries' and areas' experiences in leasehold tenure systems and the maximisation of land transfer values, especially those of Hong Kong and Singapore (Chan 1999: 54; Li *et al.* 2000: 349). In these latter cases, both governments own most – if not all – of the land in their territories, and thus exert almost monopolistic control directly over land supply, planning and development control. Both governments use land as a revenue generator. In the case of Hong Kong, land lease through public bidding maximises land value and makes a significant contribution to Hong Kong's economic development and government revenues. These advantages were taken into account in China's various land ownership and land tenureship laws and regulations. It is interesting to note that, by adopting western legal doctrines, concepts, procedures, and terminology from various contexts, China's new land policy has a certain degree of flexibility and there are possibilities for applying new and innovative strategies to the practice of land development.

'The gradualist urban land reforms are intrinsically linked with the incremental economic reform in transitional China' (Zhu 1999). Chinese land policy reform has undergone a long transformation process since 1978, pursuing a double-track system to allow the co-existence of both a land allocation system and a land market. The two were gradually integrated into one unified land market in the 1990s. Even though the acts were not immediately and rigorously enforced, due to resistance from vested interests at the local level, changes in the land-use regime and the increasing economic competitiveness between cities for cross-border investment has had a positive impact on land development, government finance and urban growth. In the process, local government has become a major actor in urban development, as is illustrated by the case of Shanghai below.

#### **4. Shanghai's land reform: measures and results**

##### ***Measures***

China's national government has provided the basic principles for land reform at the local level, but still requires local actors to further clarify the details of operationalisation in local contexts. Shanghai started to charge foreign investors fees for land-use rights in 1986. In order to devise its own land-lease system that could be adapted to the market system and made easier for implementation, Shanghai examined Hong Kong's legal system for land tenureship and the operational procedures by which Hong Kong conducted its land lease operation. Shanghai also hoped that by learning from Hong Kong's system, it could obtain significant income from land-lease to supplement the budget deficit in infrastructure development. Following the national land reform program in the 1980s, a series of local regulations on land issues were established in Shanghai. For example, the *Regulations for the Transfer of Land Use Rights in Shanghai*, adopted on 29 November 1987, symbolised Shanghai's first formal shift towards land reform (Lu 1999: 66). This regulation, which came into effect on 1 January 1988, regulates the procedures of gaining land-use rights and related responsibilities, rights and obligations on the part of investors. It also established the standard of ten grades in land-use fees, based on different land-use functions. The fees range from 60-100 yuan/m<sup>2</sup> in the central commercial area to 0.5 yuan/m<sup>2</sup> in the countryside. Later, the municipality adjusted the fee range to between 130 yuan/m<sup>2</sup> and 0.5 yuan/m<sup>2</sup> in 1991, and between 170 yuan/m<sup>2</sup> and 0.5 yuan/m<sup>2</sup> in according with the increased property price during the boom of the local real estate market (Shanghai Municipal Housing, Land and Resources Administration Bureau (SMHLRAB) and Shanghai Municipal Statistics Bureau (SMSB), 1994-2003).

Also in 1988, the first bidding project for land leasing was conducted in Hongqiao District in Shanghai, involving six foreign real estate developers. Land-lease bidding strategies from Hong Kong were adopted for this project. The price was fixed according to the total construction area, reflecting the real market value rather than the raw land area (as had been used under previous policies). The price also included the provision of infrastructure by the government. The 1.29-hectare plot was finally leased at US\$485/m<sup>2</sup> by a Japanese developer (Lu 1999: 241). The success of the Hongqiao bid encouraged the Shanghai authorities to apply the land lease in a broader context. Fearing great opposition from groups with vested interests, however, as well as the damage that failure might do to the local investment environment, Shanghai decided to conduct a pilot land reform project in a restricted area before the applying the strategy citywide. Pudong (see Figure 1), a relatively isolated area on the eastern bank of Huangpu River that was to be established as the new economic centre of Shanghai, provided a perfect location for testing Shanghai's market system and market-oriented land policy. The 1990 *Draft Regulation on Pudong New Area Planning and Construction Administration and the Regulation on Pudong New Area Land Administration* was issued, requiring all organisations and real estate developers to obtain land-lease rights in Pudong through bidding, auction or negotiation. Land could be leased for 40-70 years through direct negotiation, a tendering process or via auction. In fact, Pudong New Area was the first district in Shanghai to strictly enforce land lease procedures.

Both the transferring of land-use rights by sale (*Tudi Suoyouquan Churang*) and the leasing of land-use rights (*Tudi Zulin*) are based on the principle of separating land-use rights from land ownership. Based on the land value, the state or its representatives can transfer the land-use rights for a certain period of time to the land's future user, whether this is an individual, developer or organisation. The

difference between the two methods lies in the following two aspects. The first is that of the value of land-use rights. If the right to land-use is transferred by sale, during the period of land-use transfer the land-user enjoys full rights of occupation, use, benefits and part limitation in handling the land. If the land-use right is leased, during the period of land-use lease the leaser only enjoys the occupation rights, and any possibility of handling the land-use rights is limited by the land owner. The second difference relates to payment amounts and methods. If land-use rights are transferred by sale, the land user should pay a land-use transferring fee at one time; if the land use right is leased, the leaser pays an annual rent on the lease (Zhou 2003: 254). The flexible leasing of land-use rights was adopted in the midst of the 1997-1999 Asian Economic Crisis. The aim was to provide flexibility for those investors who were finding it difficult to acquire large bank loans due to the financial crisis. The change in the land-lease approach demonstrates the flexibility with which Shanghai reacted to changes in the market, and especially to the Asian Economic Crisis.

Whether using the model of transferring land-use rights by sale or the model of leasing land-use rights, Pudong has determined that land development should follow the principle of land commercialisation in its administrative territory through negotiation, bidding or auction based on the land-price standard established by the local municipality. The principle also applies to land allocated to state-owned enterprises before 1990. In the urbanised part of Pudong, some land had been allocated by the state to enterprises and neighbourhoods for decades; whereas in other cases, new real estate development had started in the 1980s, prior to the Pudong 'master plan' being issued in 1990-1991. For those enterprises and neighbourhoods that had already received the allocated land for dozens of years, the reform embedded a redevelopment option in these use rights. According to official Pudong planning, this could result in two different outcomes: the enterprises and institutions could either relocate to a more spacious area if their original functions were not compatible with the requirements of the new plan; or, if their original functions were compatible, they could redevelop the land at a higher floor-to-area ratio and at higher quality, so as to create more building space for commercial business use. In the former case, the state provided a certain amount of compensation for the interruption of production during relocation. The compensation received by the relocated enterprises or institutions could be used to purchase the right to use a new piece of land at a preferential price (provided by the state through negotiation). In the latter case, enterprises and institutes were allowed to commence with redevelopment after they had paid a fee for transferring land-use rights (a general preferential price that was lower than the normal price) (Wan and Yuan 2001: 98). Even though they might continue with their redevelopment plan, 'the value of this option is quite different than it would be for the owner of a property in a market economy, where such a redevelopment option can be sold and has no expiry date' (Fu *et al* 1999: 49-78). In the case of illegal land trading or occupation, the occupiers not only had to pay fines but also had to pay back the full fee for transferring land-use rights. By means of such measures, all enterprises and institutions were included in the land commercialisation process, and a 'fair start' was achieved for both existing actors and newcomers.

Besides the regulation of land commercialisation for existing urban land, Pudong also regulated the process of expropriating agricultural land that had been held in collective ownership. Pudong used a 'land bank system' to ensure that enough land was held in reserve for further expansion. The expropriation of farmland is considered

to be a main source of maintaining the land bank system. The Pudong New Area covers 520 km<sup>2</sup>, of which 300 km<sup>2</sup> is still farmland. Under this policy, the government expropriates the required farmland by first paying 30% of the current expropriation compensation as a deposit to acquire the farmer's land, and then paying the other 70% at the time of acquiring the land. In contrast to urban land ownership, land in rural China is collectively owned by farmers and is considered by its owners to be living capital. To expropriate farmland, it is not only necessary to take the land's value into account, but also social compensation for those who lose their living capital or property, including issues relating to employment and pensions.

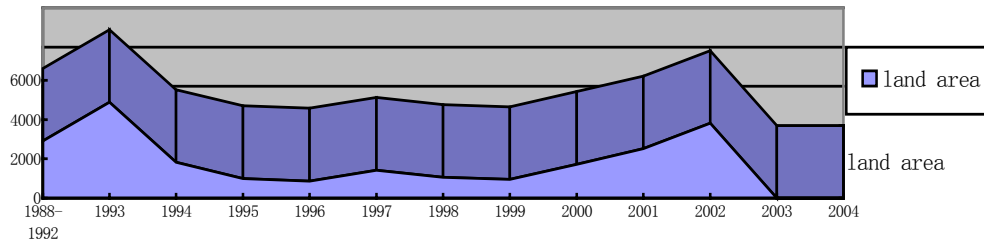


Figure 2: Land transfer in Shanghai, 1988-2004 (Unit: hectare) (Shanghai Municipal Statistical Bureau, 2005: 54)

The experience of implementing land reform in Pudong New Area has provided a good reference point for Shanghai to further implement its new land policy on a city-wide scale. The new land policy provides a relatively fair environment that is designed to attract developers from both China and abroad to compete in Shanghai's new economic boom. In total, 23,053-hectare land areas were granted land-use rights in the 14 years between 1988 and 2002 (this figure excludes the land areas and gross floor areas of granted land with contract terminated and acquired back by paying back land premiums)(SMHLRAB and SMSB 2003) The new land institution facilitated the participation of both Chinese and foreign private sector organisations, and the inflow of private finance to the land market and the real estate sector in Shanghai. As a result, the volume of land transfers has been heavily influenced by the condition of the local real estate market and local and international financial markets. As Figure 2 shows, at the peak of the local real estate market in 1993, the area of land transfer was more than that of the total amount in the four years between 1988 and 1992. During the Southeast Asian Economic Crisis, however, the volume of land transfer dropped to almost its lowest point. Furthermore, the commercialisation process not only prevents the loss of state resources, but also helps to generate large sums of capital that can be invested in Pudong's land and infrastructure development schemes. For example, just the payments collected from enterprises and institutes that wanted to redevelop land allocated for commercial business use had reached 1.5 billion yuan (US\$0.18 billion) by 1996, covering a total land area of 3.85 km<sup>2</sup>. The total fee collected from land-leasing until 1995 was 1.1 billion yuan and US\$52 million, a total of US\$185 million (Wan and Yuan 2001: 98-101). In fact, between the new policy being applied city-wide and the end of 2000, Shanghai raised more than 100 billion yuan (US\$12 billion) from land transfers to invest in its infrastructure system (Shi et al 2003: 13).

### Results

Urban land reform in China has focused on building up a market leasehold system rather than the privatisation of land ownership. Although this system is 'socialist' in

nature, in the long term, the reforms adopted will inevitably result in the commercialisation of land (Li *et al* 2000: 349). The establishment of a land market, although defined by national policy, has actually been operationalised at the local level. The ambiguity of national land reform policy has created substantial uncertainty when it comes to local implementation. On the other hand, national policy has allowed sufficient space for creative local implementers to adapt regulations to suit local conditions. Shanghai's land reform is a clear example of a trial-and-error process; the city has learned from countries and cities that have successful land leasehold systems, and adjusted their models to the complex local transitional context. From the earliest experiments in defining land transfer fees to the land auction in Hongqiao District, and then to the fully commercialised land leasehold system, Shanghai has gradually established a land market based on the recognition of land as a market asset and the basic right to use, invest, transfer and return land-use rights, that is based on land value and the rule of law in general. Shanghai's land reform process and the establishment of a land market displays the distinctive stages proposed by Williamson and Wallace (2007), as set out in Part 2.

Observing the transition from a land allocation system to a market leasehold system, we can also note a series of changing parameters in the political, economic and social context. One of the most striking aspects of the emerging land market is that fact that relationships are being reshaped between the state, private investors, groups that had benefited from the old regime, and those individuals who are directly or indirectly affected by changes in the current land use plan and land market. For the public sector, land reform has forced the local government and its agencies to respect market rules and adopt a business-oriented stance, so as to create an enabling environment for the market. Most local municipal bureaus in Shanghai are deeply involved in the operationalisation of various market reform measures, providing a detailed interpretation of land reform measures so that laws originating from the central government can be implemented locally. The gradual process of building up the legal system relating to land illustrates the different amendments and reforms that have been made by local government actors in response to the changing situation.

Moreover, the gradual implementation of land reform has increasingly put pressure on local government to be more open and transparent in dealing with the market as a supplier of land. In Shanghai, only dozens of pieces of land were transferred via bidding about ten years time. Most deals were struck using negotiation, a flexible yet opaque process that many critics have claimed lacks equality and openness. In negotiations, those developers with better contacts in local government and with local officials tend to acquire land in better locations or at cheaper prices. Critics suspect such deals to be the main source of corruption, and increasing speculative activities provoke intermittent anger in the population. Shanghai issued the *Decision on Amending the Methods of Granting Land Use Rights in Shanghai by the People's Government of Shanghai* on 1 July 2001 to ensure that the granting of land-use rights for commercial land is acquired via public bidding. In the second half of 2001, the land-use rights for 137 pieces of land in Shanghai were transferred by means of public bidding or invited bidding (China Daily 2003). As a result of the new regulation, land transferred by means of public bidding has increased dramatically from 17% in 2001 to 76% in 2003. Even though the process of making the land market more open and transparent is just beginning, more public information has been provided not only to those developers who do not have advantageous connections, but also to citizens who



may be interested in participating in the decision-making process of a development plan.

For the private sector, land reform legitimises the involvement of private sector actors and private finance in urban (re)development and the property market, and especially penetration by foreign direct investment (FDI). Since land transfer is based on value, both publicly backed enterprises and private investors can operate in a fair land transfer environment. Private sector investors, particularly those from abroad, are considered to play a significant role in stimulating the local economy and real estate market. In fact, Shanghai has a series of policies that are designed to encourage private-sector investment in Shanghai and its special economic zones. Pudong has encouraged foreign investors since the 1990s. Strategies include offering investors preferential tax deduction or tax exemption schemes, cheaper land transfer prices, allowing private sector involvement in land development schemes (including foreign developers) and infrastructure development that used to have restrictions for private sector's involvement, and encouraging joint ventures between public development companies and private sector actors (that is, foreign developers, banks and investment companies). As a result of various tactics, the private sector has increasingly moved into land and real estate development in Pudong (Chen 2004). The large amount of capital that private actors have brought with them has become a major source for infrastructure development, speeding up land development in the whole district.

We should highlight in particular the steadily increasing role that FDI has played in Shanghai's urban development. Since 1988, Shanghai has made substantial use of land-lease to attract FDI flows, restructure the city, generate capital for infrastructure projects, and fund new residential housing developments (primarily in suburban locations) (Olds 2001: 184). Shanghai has seen significant growth in foreign investment. Between 1983 and 1994, US\$10.7 billion of FDI was pledged in Shanghai's real estate sector. By contrast, about US\$1.05 billion of foreign funds were invested in the real estate sector in 1996 alone. Between 1991 and 1996, US\$10 billion was invested in infrastructure, gradually increasing to US\$22.1 billion between 1994 and 2000 (Olds 2001: 180). To a large degree, the implementation of major infrastructure projects has also been funded by foreign capital flows.

Furthermore, land reform has actively facilitated the emergence of Shanghai's real estate market. Increasing numbers of real estate companies indicates growth in the real estate market. In 1979, the first two real estate companies were established in Shanghai. This number had increased to 94 in 1991, and 2,635 in 1995. Such growth is also reflected in the share of investments in fixed assets, the real estate sector, and commodity housing. Investment in fixed assets has increased dramatically, from 22.3 billion yuan (US\$2.7 billion) in 1990 to 161.85 billion yuan (US\$19.5 billion) in 2003. Investment in the real estate sector has also increased sharply, from 0.8 billion yuan (US\$0.1 billion) in 1990 to 90.1 billion yuan (US\$10.9 billion) in 2003. Investment in the development and construction of commodity buildings in Shanghai in the six years between 1986 and 1992 was five billion yuan (US\$0.6 billion), but investment in 2003 had already reached 90 billion yuan (US\$10.9 billion). Over the six years between 1986 and 1992, the construction area of commodity buildings in Shanghai was 82 million m<sup>2</sup>; in 2003, in one year alone, the construction area of commodity buildings was already 69 million m<sup>2</sup>. As a result, Shanghai has experienced a boom in urban real estate development. Between 1991 and 2000, Shanghai demolished 26

million m<sup>2</sup> floor space of existing buildings and relocated half a million households to newly built apartments. The housing situation continues to improve as a result, with the per capita net floor area increasing from 6.6 m<sup>2</sup> in 1990 to 13.8 m<sup>2</sup> in 2003. The growth of the local real estate market has been strongly facilitated by the inflow of private finance and the participation of private sector actors from China and abroad, as we will show in the next section.

## **5. Challenges for creating a credible land market: problems and strategies**

### ***Problems***

Along with the gradual establishment of a functioning land market and institutions based on land value, land reform in Shanghai has also faced a series of challenges to its credibility, as perceived by diverse social actors. The major problems relate to inconsistency and ambiguity in land policies and/or regulations; inadequate and inaccessible property information; and lack of credibility and independence in the dispute settlement system. These problems have inevitably played a role in the erosion of the trust and hope that societal actors had invested in the new land reform institutions.

The first challenge is related to inconsistency and ambiguity in land policies and/or regulations. Institutions' structures are dictated by social-economic parameters. When the state fails to respond to a shift in these parameters, it can risk failing to create the right institution at the right time. Ho (2005b) points out, however, that the Chinese state has deliberately refrained from creating and defining certain institutions, a practice that he terms 'intentional institutional ambiguity.' This ambiguity may in result in different interpretations of the same terms, clauses or regulations, or even conflicting policies on certain issues. It may also provide a space to allow for conflicts of interest between governmental authorities and the different ideologies underlying their stance, depending on the government departments that are responsible for drafting laws and regulations. There are, for example, conflicts in balancing demands for land due to rapid urban growth and increasing pressure for the preservation of farmland; and conflicts between land-use rights and farm protection measures that aim to restrict land expropriation. It is unlikely that such problems will be easily solved under current reform ideology and without further political reform.

The second challenge relates to the availability of property information. As Chan puts it:

*In many countries, property information is readily available from various sources such as real estate agents, the local authorities, the land title office, the press, and information providers. In mainland China, it is very difficult to get such information. Property information is mainly controlled by the relevant government departments. Information from the press, if any, is often incomplete and unreliable. (Chan 1999: 55)*

Compared with many other Chinese cities, Shanghai has made great progress in improving the transparency of its property information system. Especially since 2001, when Shanghai pushed through the land bidding plan, more property information has been publicly accessible via the government website. This has reduced asymmetries in access to information and lessened the chances of powerful and well-connected actors

taking advantage of inside information to acquire land at a huge profit. Without a transparent information system supported by land titling, land registration, and competent government control of land transfers and speculation, however, such efforts can hardly lead to a complete diminishing of black market activities.

The third challenge, and perhaps one of the most debated issues (Lai 1995; Chan 1999; Ding 2003; Ho 2005a, 2005b; Ho and Spoor 2006), is the current lack of credibility and independence in the dispute settlement system. Land values and property prices in the city centre (especially around the Central Business Area and commercial centres) have sharply increased, whereas land values and property prices in the most distant urban and suburban districts have increased at more moderate rates. The differentiation in land values between locations within the city has been reconfigured by respecting land values related to different functions and market demand for land in specific locations and has led to spatial redistribution in Shanghai is. The city has seen a concentration in functions as a result, with commercial and mixed-use developments (commercial and luxury residential functions) in the core, residential projects in relatively distant districts, and a noticeable cluster of low-density villa projects further located in the newly developed area. One reason for the population decentralisation has been the cost of resettlement. Since the district governments have a responsibility to resettle residents and enterprises displaced by redevelopment, they have to take into account the balance between resettlement costs and income from land leasing. Giving the density of Chinese cities, and the principle that resettled households must receive adequate replacement quarters that comply with the government's minimum standards for unit quality and size (which are generally much higher than those for current households), redevelopment can result in very significant costs. In Shanghai, district governments report that between 60% and 70% of district land lease revenues are used to finance resettlement. To clear every hectare of land, 800 to 1000 residents have to be relocated (Fu *et al* 1999). The magnitude of resettlement efforts has forced the district government to shift from a policy of in-site resettlement to off-site resettlement of displaced occupants, further accelerating the urbanisation process and the rapid expansion of new districts in the suburbs.

The mass retreat of residential populations (shown in Table 2) to give way to office property and the urban 'new rich', albeit not in every case a forced movement and in general accompanied with economic compensation, has created enormous social tensions between the government, the market and social actors, and between different social groups and even individuals within social groups. One-tenth of the total Shanghai population was relocated during the last two decades due to urban redevelopment. The process of relocation has increasingly led to tensions between the government, developers and inhabitants, even though financial compensation has been provided and its existence communicated to the public (Table 3 shows a recent compensation standard for relocation in 2003), relocation houses are often for private ownership, and professional staff deal with relocation projects. Most of these tensions revolve around the redistribution of interests among groups and actors.

**Table 2: Building resettlement in Shanghai, 1995-2004 (Shanghai Municipal statistical Bureau 2005: 379)**

Year	Number of resettlements (units)	Of which	Floor space resettled (10,000 m <sup>2</sup> )	Of which
		Residential (%)		Residential (%)
1995	75777	97.25	322.77	78.66
1996	89132	97.03	342.95	75.48
1997	79857	96.91	479.67	75.71
1998	78205	96.10	452.22	76.06
1999	75185	98.04	342.50	72.46
2000	70606	96.72	365.77	78.83
2001	73728	97.53	515.65	74.98
2002	101097	97.64	644.53	75.25
2003	80858	97.80	584.93	81.20
2004	42415	97.97	308.40	75.40

**Table 3: Standard price of land compensation in Shanghai (SMHLRAB and SMSB 2003)**

Level of area	Area	Minimum compensation per m <sup>2</sup> construction area (yuan)	Subsidy
Three A	Tangqiao Xin Lu, Pudian Road, Yanggao Nanlu, Yuanshen Road, East bank of Huangpu River	4170	20%
Three B	Within the inner-ring road, Level three area out of A Area in Level three, and Huamu Town	3900	20%
Three C	Level three area except those included in A and B	3500	20%
Four A	Jiyang Road, Huannanyi Evenue, Yanggao Nan Road, Chuanyang River, Luoshan Road, Yanggao Bei Road, Zhaojiagou and the border of level three	3150	20%
Four B	Level four area except those included in A	2700	20%
Five	/	1891	20%
Six	/	1668	20%

Note: 1 yuan = US\$0.12

### **Strategies**

While land tenure and policy is established within a specific institutional setting, land development depends on a host of factors that lie beyond the boundaries of a particular locality. These factors may be political, economic, financial or social; they may involve the management of land-use or the operation of the property market. Land issues concern not only land resources and capital, but also the various parties

directly or indirectly involved with land resources by virtue of ownership or use rights. Clearly, efficient land usage and the proper balancing of the interests of the different parties involved in land transfer, including the economically disadvantaged, influences the speed and results of urban development or redevelopment (Chen 2007: 91). It is not difficult to understand that there are certain limits to land reform with regard to developing land markets and institutions, especially when these constraints are defined by a country's political system and social ideology. Nevertheless, much can still be done to improve the land market and institutions, and create optimal conditions for the proper functioning of the land market and administrative system. These measures include:

1. Pragmatically learning lessons from elsewhere and adapting them to local settings. Researchers have documented how 40 countries successfully established land markets and institutions. It would be important to continue to follow-up on this research and adapt certain strategies to Shanghai's local conditions, as happened previously with land policies from Hong Kong and Singapore. The research and subsequent adaptation should focus on the administrative infrastructure for land reform, supporting the legal system, and the distribution of management systems and financial services capacity in preparation for the complex market.
2. Enhance information transparency by developing a cadastral system. In addition to government channels, there should be better access to information relating to the cadastre. This information system should not only be locally-oriented, but should also connect with regional and national systems and should be accessible to the general public.
3. Increasing independence in dispute management. In order to achieve this, it would be important to involve more citizens at earlier stages of making and revising relocation regulations. It would also be important to provide better information to relocated households prior to relocation projects. Tensions will only be reduced by means of more open and democratic discussions and procedures surrounding the redevelopment process. After all, it is ultimately local people who create a city and preserve its history and culture during a period of fast transition.

With regard to each of these improvements, it is important to emphasise the state's role in guiding institutional change. The state is responsible for creating the necessary institutions to stimulate the emergence of a land market or guide its development. In addition, the state also has a social responsibility as the provider of justice for the people, whether it is elected or not. Unfortunately, the state has shown limited capacity in tackling these problems and currently provides insufficient means of guaranteeing the fair distribution of land value increases to social actors. State intervention should therefore focus on increasing transparency in information systems and regulating the land market in line with its overall social objectives, so as to prevent the concentration of land or interests in the hands of the powerful. Only when the state has found the right balance between market forces and social responsibility, will the state be able to direct the transition of land institutions in the right direction and build a credible land market.

## **6. Final remarks**

This paper has reviewed the evolution of land reform policies to create a land market in China at both the national and local levels. Although in general, China has established market principles and has recognised land as a market asset, the emerging land market is far from perfect. Some of its problems stem from institutional pitfalls, such as inconsistency and ambiguity in land policies and regulations. Other problems highlight the need to further advance the administrative infrastructure to support the land market, as shown by lack of access to transparent property information. Some problems relate to both, such as the lack of credibility and independence in the dispute settlement system. In order to establish well-functioning land institutions, the state should invest greater effort in developing credible land institutions that emphasise fairness, transparency, independence and efficiency, and achieve a balance between the demands and interests of different social actors. In this process, the state can and should fulfil its important social responsibilities.

## 7. References

- Chan, N. (1999) Land-use rights in Mainland China: problems and recommendations for improvement, *Journal of Real Estate Literature* 7(1), 53-63
- Chan, N. (2003) Land acquisition compensation in China – problems & answers, *International Real Estate Review* 6(1), 136-152
- Chen, Y. (2004) Public-private partnership in urban area redevelopment in a Chinese context: lessons from Shanghai Pudong Development. *Proceedings of CRIOCM 2004 International Research Symposium on Advancement of Construction Management and Real Estate*, Hong Kong, China, 6-7 December 2004, 353-364
- Chen, Y. (2007) *Shanghai Pudong. Urban Development in an Era of Global-Local Interaction*. Amsterdam: IOS Press.
- Ding, C. (2003) Land policy reform in China: assessment and prospects, *Land Use Policy* 20, 109-120
- China Daily, *Land Bid Plan Announced in Shanghai*, August 21, 2003
- Fu, Y., Somerville, T. and Huang, T. (1999) Land use rights, government land supply, and the pattern of redevelopment in Shanghai, *International Real Estate Review* 2(1), 49-78
- Guthrie, D. (1999) *Dragon in a Three-Piece Suit: The Emergence of Capitalism in China*. Princeton: Princeton University Press
- Ho, P. (2005a) Credibility of institutions: forestry, social conflict and titling in China, *Land Use Policy*, 23, 588-603
- Ho, P. (2005b) *Institutions in transition. Land ownership, property rights and social conflict in China*, Oxford: Oxford University Press.
- Ho, P. and Spoor, M. (2006) Whose land? The political economy of land titling in transitional economies, *Land Use Policy* 23, 580-587
- Lai, L.W.C. (1995) Land use rights reform in China: some theoretical issues, *Land Use Policy*, 12 (4), 281-289
- Li, L., McKinnell, K. and Walker, A. (2000) Convergence of the land tenure systems of China, Hong Kong and Taiwan? *Journal of Property Research* 17(4), 339-352
- Lu, W. (ed.) (1999) *Shanghai Fangdichan Zhi* [Shanghai Real Estate Historiography]. Shanghai: Shanghai Shehui Kexueyuan Chubanshe
- Needham, D.B. (2003). One hundred years of public land leasing in the Netherlands. In Bourassa, S.C. & Hong, Y.H. (eds.), *Leasing Public Land: Policy Debates*

- and International Experiences*. Cambridge Mass: Lincoln Institute of Land Policy, 61-82
- Pei, M (1997) Citizens v. Mandarins: administrative litigation in China, *China Quarterly* 152, 832-862
- Olds, K. (2001) *Globalization and Urban Change: Capital, Culture, and Pacific Rim Mega-Projects*. Oxford: Oxford University Press
- Shanghai Municipal Statistical Bureau (2005) *Shanghai Statistical Yearbook*, Beijing: China Statistics Press.
- Shanghai Municipal Housing, Land and Resources Administration Bureau (SMHLRAB), Shanghai Municipal Statistics Bureau(SMSB) (1994 - 2004) *Shanghai Real Estate Market*, Shanghai: China Statistics Press
- Shi, L. Qi, G. and Yuan, M. (2003) *Xiang Shanghai Xuexi (Learning from Shanghai)* Beijing: World Affairs Press.
- Stuedler, D., Rajabifard, A, and Williamson, I. (2004) Evaluation of land administration systems, *Land Use Policy* 21, 371-380
- Syms, P. (2002) *Land Development and Design*. Oxford: Blackwell
- Wallace, J. and Williamson, I. (2006) Building land markets, *Land Use Policy* 23, 123-135
- Wan, Z. and Yuan, E. (2001) *Toushi Pudong, Sisuo Pudong (Explore Pudong, analyse Pudong)* Shanghai: Shanghai People's Press.
- Williamson, I. and Wallace, J. (2007) *Building land markets in the Asia Pacific Region. International Workshop on Good Land Administration – Its Role in Economic Development*, Ulaanbaatar, Mongolia, 27-29 June 2007. Consulted on October 28, 2007 at [http://www.la-east-west.mn/presentations\\_and\\_papers/Ian%20Williamson%20Australia/0627/BUilding%20LAND%20MARKETS%20IN%20THE%20ASIA%20PACIFIC%20REGION.pdf](http://www.la-east-west.mn/presentations_and_papers/Ian%20Williamson%20Australia/0627/BUilding%20LAND%20MARKETS%20IN%20THE%20ASIA%20PACIFIC%20REGION.pdf)
- Wu, W. (1999) City profile-Shanghai, *Cities*, 16(3), pp. 207-216
- Zhou, T. (ed.) (2003) *Shanghai Jubian de Qidi-Gaige he Chuangxin de Shijian yu Tansuo (Inspiration from Shanghai's dramatic transformation: practice and experiment in reform and innovation)* Shanghai: Shanghai People's Press (in Chinese)
- Zhu, J. (1999) Local growth coalition: the context and implications of China's gradualist land reform, *International Journal of Urban and Regional Research*, 23(3), pp. 534-548

**“Metropolitanizing” the State:  
Scalar Transformations and Mega-Project Development in Shanghai and  
Mumbai**

**Xuefei REN, Liza WEINSTEIN**

*Department of Sociology, Michigan State University*

**Abstract**

This study examines the impact of globalization on urban governance in China and India. Based on detailed case studies of mega-project development in Shanghai and Mumbai, we consider why Shanghai has been better able than Mumbai to transform its built environment to facilitate capital accumulation. We argue that the degree to which national states “metropolitanize” affects their ability to facilitate urban restructuring. The metropolitanization of the state refers to the deliberate articulation of state power, authority and resources at the metropolitan level to ensure the competitiveness of urban regions. We argue that the metropolitanization of the state must be understood in the state’s historically-structured institutional context. In the case of China—and to a lesser degree India—metropolitanization is a flexible strategy adopted by the national state in an attempt to govern in the increasingly complex global arena. The study also considers the implications of the metropolitanization of the state for democratic participation, finding that there is no inherent relationship between metropolitanization and democratic deepening.



## Urbanization and Urban Form

## **China's Rapid Urbanization: Is Compact Shanghai Sustainable?**

**Rebecca L.H. CHIU**

*Centre of Urban Planning & Environmental Management, The University of Hong Kong*

### **Abstract**

Since the economic reform in the eighties, cities in China have undergone phenomenal changes. The sustainability impacts of these transformations are yet to be assessed. The purpose of this pioneering study is to investigate the sustainability of the urban form of Shanghai, the nation's economic leader.

The conceptual construct for this study is based on an analytical framework derived from an extensive review of the compact city literature. Shanghai already possesses, *prima facie*, the urban characteristics recommended by the compact city model, i.e. high density, mixed land uses and heavy reliance on public transport. However, does it meet the sustainability objectives and criteria underlying the urban city advocacy? More specifically, do the post-reform trends of Shanghai's spatial and related development strategies and processes move away or closer towards these newly advocated urban sustainability strategies? As argued in the literature, the compact urban form incurs both sustainability benefits and disbenefits, which vary across cities of different socio-cultural and economic polity. What then are the sustainability benefits and disbenefits of this large Chinese city? This research paper aims to seek answers for these questions.

# Measurement of the Degree of Compactness of Large Cities in China: A Conceptual Analysis

Roger C.K. CHAN, Yongqing XIE

*Centre of Urban Planning and Environmental Management, The University of Hong Kong*

## **Abstract**

China is one of the developing countries with fast urban growth, and correspondingly the area of arable land of China is decreasing rapidly. To control expansion of large cities and to protect the arable land, the Chinese government published a series of policies, and considered that the cities of China should develop towards the compact cities paradigm. To put the compact city paradigm into practice, it is important to explore the status quo of the compact degree of these cities. The large cities in coastal provinces are the most developed region experiencing fast urban sprawl, with the high population density, gross national product and built-up area density in China. This paper will select the large cities in coastal provinces as case studies to reveal the degree of compactness. A conceptual model will be developed and the findings will inform the development of compact cities in China.

**Keywords:** Compact city, Coastal Region, China

## The Development of Guangzhou's University Town Project: China's Old Wine of Revanchist City in a New Bottle?

Daniel You-Ren YANG<sup>1</sup>, Hong-Kai WANG<sup>2</sup>, Ming-Yi Hsiung<sup>2</sup>

*1. School of Environment and Development, University of Manchester*

*2. Graduate Institute of Building and Planning, National Taiwan University*

### **Abstract**

After last round of industrial zone fever, in the name of knowledge economy, another large-scale land development project emerged in China — the university town. From 1996 to 2007 there are more than fifty university town appeared in China. Except to raise the enrolment ratio of university students, such project may also contribute to real estate market locally. Taking Guangzhou university town project as the case, this paper aims to explain the local governments' incentives for launching such project, as well as exploring the land development mechanism. Based on the model of "rent-gap seeking", this paper pays much attention on those specific local institutions of "urban revanchism", i.e., the ways of confiscation (land acquisition). In other words, the propose of this article is to investigate weather the university town "movement" might be regarded as the revised version of "industrial zone" fever from the perspectives of local governments' incentives and state-village relations.

Keyword: Land development, rent-gap seeking, local government, land acquisition, local institution, university town

# Urban Expanding Process along Transport Line and the Policy Framework: The Case of Nanjing City

Shuang CHEN

*Nanjing Institute of Geography and Limnology*

## **Abstract**

Since the late of 1990s cities in the east coastal developed area in China have expanded fast with a low development density like the cities did in Europe and North America. From the central urban area great population and industries migrated to suburban area. The urban space expanded mostly along transport line or in the form of cluster at the beginning stage. Out of the two patterns the linear one appeared frequently in the process of bottom-up development, and was scarcely guided by planning. This paper will provide an analysis of local incentives driving urban development and some suggestion of land policy steering urban growth taking the case of two urban-rural gradient zones along transport lines of Nanjing city in China. In this paper, the author will firstly analyze spatial-temporal land use changes in the two zones, then discuss the process of urban growth and forces driving the growth, which incorporates environmental factors, economic factors and policy factors, and lastly statistically analyze correlations between the factors and urban development.

**Keywords:** urban growth, land use, planning, policy, Nanjing, China

# Study on Determinants of Housing Demand for Community in Beijing

Longjuan HE<sup>1</sup>, Lihua ZHAO<sup>2</sup>

<sup>1</sup>School of Geography, Beijing Normal University, Beijing China, 100875  
Email: hlj.bnu@gmail.com

<sup>2</sup>School of Marketing, University of New South Wales, Sydney Australia, 2052  
Email: lihua.zhao@unsw.edu.au

## Abstract

With economy development and urban expansion, Beijing's housing industry developed extremely rapid during the last decades. Residents' community selection in Beijing is coincided with the spatial tendency of urban planning and infrastructures development. The housing demand is affected more by community attributes than dwelling attributes. In order to illustrate the relationship of community attributes with housing demand and their determination, we structured out four types of variables of housing demand for community basing on previous researches and real situation in Beijing: (1) fiscal variables and local public services, (2) transportation and job opportunity, (3) socio-economic characteristics of the population, and (4) built environment features of the community. Based on the correlation analysis and comparison method, we drawn conclusions that public services and work opportunity are two determinant factors for housing demand for community. In another words, citizens are keener to live in a convenient community with connection to schools, hospitals, public transportation, and job opportunity, etc. The result also hinted that people don't weight too much on physical and economic environment features of community as housing demand in Beijing is inelastic and unsatisfied. This study will make future study on housing demand more meaningful.

**Keywords:** community choice, housing development, housing demand, Beijing

## 1. Introduction

The acceleration of the Chinese economy development and housing system reform drive the real estate industry flourish rapidly in the last two decades. Large numbers of houses have been built by developers, but the housing demand is far satisfied in some areas. The inconsistency between housing supply and demand now is a hard nut to crack in Beijing. Regional inequality of housing price and housing demand also exist apparently. The Beijing Government has been encouraging people to live in extension districts of urban function and new districts of urban development, and developing new cities (*xincheng*) for residential communities. Urban planning strategies and land provision plans play dominant roles in housing supply. Policies have been primarily aimed at increasing the supply of land for housing where good facilities are already planned in place. Under this development situation, Beijing's housing distribution was characterized by five residential regions as the extensions of main roads (Zhang, 2002).

Housing demand has been estimated by modeling consumption of houses in a region as a function of environmental, structural, and neighborhood characteristics. Most of

the factors that affect housing demand are spatially heterogeneous among regions. It was said that what matters real estate most is location. The majority of households choose a community before they choose a specific neighborhood (Rapaport, 1997; Cho, 2005), so the housing demand needs to be modeled in the context of community choice at first. Community, characterized by residents' income, living preference and administrative circumstances, can provide the suite of infrastructure, service, and other characteristics desired by the decision makers. When households choose housing in different communities, they take characteristics of the communities, local public facilities, community fiscal variables and equilibrium house prices into account (Nechyba, 1997, 1998).

Single factor of residential location and community choice has been modeled to a deeper extent (McFadden, 1978), especially, the influence of public facilities (school, hospital) and transportation on residents' housing location choice (Anas, 1982). By contrast, the existing housing demand literature has seldom modeled the choice of a specific community as part of the household's optimization problem (Cho, 2005).

Beijing housing market has become increasingly complex and diverse. Latest housing demand survey conducted by Beijing Construction Research Center in 2006 reflected that, transportation, location and price are three determinant factors when people make decision on housing purchase. People compare housing location from the infrastructure aspect, including commercial, education and health facilities. Because of the unbalanced spatial distribution of housing supply, there are more houses available in eastern districts among the third and fourth ring-roads. Hence, people have more choice in these regions.

It was felt that a better understanding of housing demand in Beijing could assist in developing more effective market ways and help achieve a better coordination between housing demand and supply. In this study, following the approaches for housing demand and community choice by Rapaport (1997) and Cho (2005), we apply correlation and comparison methods to examine the influence and determination of four types of variables on housing demand for districts in Beijing. In another words, the community attraction for housing demand will be demonstrated in this paper.

## **2. Construction of variables**

Various researches have shown that the construction of variables for housing demand for community is treated as a socio-economic system. Hua (1996) structured out the socio-economic indicators of demand for residential property in Singapore: disposable income, economic growth, level of employment, existing housing stock, inflation rate, construction cost, mortgage credit availability/supply, and household personal savings. In his community choice research, Cho (2005) considered the influence of individual-specific characteristics (education level, political view, etc.) and choice-specific attributes (population density, crime level, air pollution, etc.). Summarily, attributes of housing demand for community are mostly described as socio-economic and environmental variables.

The socio-economic variables can be classified into economic variables, demographic attributes, facilities, and accessibility. GDP per capita is a major index for community economic development and has close influence on other industries and socio and

economic activities. Housing price reflects the supply price of housing and any capitalization of the community mix of public services and tax levels (Rapaport, 1997). The price caused by community choice affects households' housing demand. Accessibility is hypothesized to increase the likelihood that households choose a particular community (Bayoh, 2006), including access to transportation, retail establishments (shopping facilities, etc.) and job opportunity, etc. Major factors contain travel time to work or shopping, distance to major road, road index, distance to major city, the number of enterprises established in community and so on (Nechyba, 1998; Cho, 2005; Bayoh, 2006). The high-quality public facilities and services and community quality have a stronger pull on potential homeowners. Specially, public schools and hospitals are proved to be important for community choice. Demographic characteristics in community including population education level, income level, security and others are social capital of local community can produce benefit for residents (Ioannides et al. 2003), thus population density, crimes rate, per capital income, household education level, number of children, unemployment rate are discussed in previous researches. In addition, environment related features are significant determinants when people make community choice, including air quality, area of open space, river area, park area or green land rate etc (Nechyba, 1998; Cho, 2005).

These attributes' distribution in different communities determines the housing values, which is the value of housing quality (Kain, et.al, 1970). Meanwhile, these attributes affect households' preference for communities and housing demand. Consequently, property value interacts with housing demand. Housing demand can be represented by the number or area of houses within a community. Cho (2005) employed number of houses within the given area as the aggregate housing demand. Considering data availability and real situation, we will take the sold housing area in 2006 by each district to represent housing demand for each district in this year.

Based on previous research results with the study purpose and data availability and real situation in Beijing property market, there are four types of variables included in this study (explained in table 1): (1) fiscal variables and local public services, (2) transportation and job opportunity, (3) socio-economic characteristics of the population, and (4) built environment features of the community. As for the first type of variables, we expect GDP per capita and average housing price for fiscal variables. The average price by community will stand for the housing price attribute. To account for the public services provided by government in community, we incorporate variables that are proxies for main services. Even though community safety is important when household makes choice, the crime rates are not concerned in this study because of their unavailability. As the result from the latest housing demand survey, education and health facilities are important when people make decision among communities. Thus, we use the key school rate and middle school rate to measure education quality and quantity, and the percentage of the second and third class hospitals to measure health service quality. As to the second type of variables, we use main road length to define transportation accessibility as we cannot get more transportation related data. Percentage of enterprises and percentage of working population in each community are expected to present as job opportunity. Socio-economic characteristics of the population are the third type of variables. Households have preference over these socioeconomic attributes. Disposable income per capita is included as a primary feature of the existing population. The level of education in



community is another factor to attract people. It is hypothesized to have positive influence on a household's location choice. People prefer to live with well educated neighbors. Hence, the rate of high-school education, under-graduate education and post-graduate education will be included. It is true that the higher employment rate is in one community, the more attractive housing market is. Hence, unemployment rate in community is also a social variable in this study. Built environmental features of the community are the fourth type of variables. Households have been paying increasingly attention about communities' environment. We expect air pollution index (API) to assess air quality released by Beijing Environment Protection Bureau. Population density has significant effect on housing choice for community. Universities' distribution is another feature to affect housing demand differently among communities. There are 85 universities in Beijing and most of them are located in *haidian* district. The concentrated distribution brings up high demand for housing around universities.

Table 1. Theoretical Definition of Variables

Groups	Variables	Initial	Definition
	Real Housing Demand	RHD	floor area of sold commercial housing in each district in 2006
Fiscal Variables and Public Facilities and Services	Per GDP	Per GDP	Gross Domestic Product per Capita
	Housing Price	HP	Price of housing per km <sup>2</sup>
	Middle schools Rate	Rsch	Percentage of middle schools in district to total amount in Beijing
	Key school Rate	Rk-sch	Percentage of key schools in district to total amount in Beijing
	class 2-3 hospitals Rate	Rhspt	Percentage of hospitals classed 2 and 3 in district to total amount in Beijing
	Crime rate	Rcrim	Percentage of crimes in district to total amount in Beijing ( not available)
Transportation and Job Opportunity	Main road length	MRI	length of main roads in district in km within 1 km <sup>2</sup> of area ( not available)
	Enterprises Rate	Rent	Percentage of enterprises in district to total amount in Beijing
	Working population Rate	Rwp	Percentage of workers employed in district to total amount in Beijing
	Universities Rate	Runi	Percentage of universities in district to total amount in Beijing
Socio-economic	Disposable Income per Capita	DI	Disposable income per person

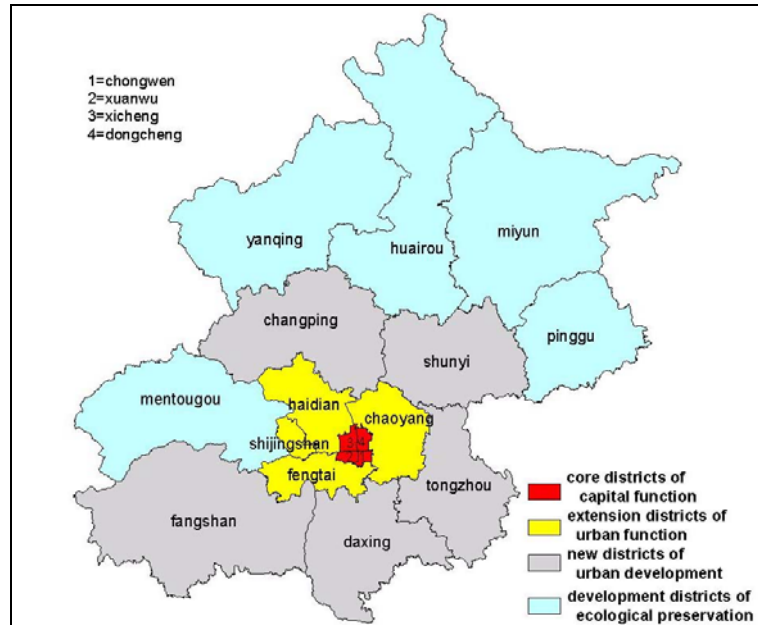
attributes of population	Unemployment Rate	ER	Rate of unemployed population to total labor force
	Population Density	PD	Permanent population within 1 km <sup>2</sup> of area
	12-year Educated Population Rate	Redu12	Percentage of 12-year educated population to total population in Beijing
	16-year Educated Population Rate	Redu16	Percentage of 16-year educated population to total population in Beijing
	19-year Educated Population Rate	Redu19	Percentage of 19-year educated population to total population in Beijing
Built Environmental features	Air Pollution Index	API	Air Pollution Index
	Parks	Pk	Area of parks in district ( not available)

### 3. Data and methodology

#### 3.1 study area

Community is a broader regional conception and can be defined with different study purposes. For example, Rapaport (1997), Nechyba(1998) and Bayoh (2006) et.al defined school district as community because of the importance of local public education to the residential choice process. Cho (2005) grouped census blocks into community types based on the degree of urbanization.

In China, census blocks are conterminous with administrative units. The local administrative districts exhibit variation in the variables of economy, public facilities, social attributes, demography and others. The housing distribution spatially varies in different districts. Thus, we choose the 18 administrative districts in Beijing as study communities, as shown in Figure 1. According to definition of different development function definition by the latest Beijing General Urban Plan (2004-2010), the 18 districts can be classified into four types of function regions: core districts of capital function (*dongcheng, xicheng, xuanwu, chongwen*), extension districts of urban function (*haidian, chaoyang, fengtai and shijinshan*), new districts of urban development (*changping, tongzhou, shunyi, daxing, fangshan*), and development districts of ecological preservation (*mentougou, pinggu, miyun, huairou and yanqing*). The study area has 16.4 thousand square kilometers of land area and over 15.8 million of permanent population in 2006. In Beijing, core districts of capital function and extension districts of urban function, are the major market for the commercial housing (Zhang, 2003; Wang et.al. 2004).



**Figure 1. Study Area**

### 3.2 Data

Three principle data sources were used in this study. SOHO China Limited Company published the Beijing property market report of 2006, and it released information on sold commercial housing in each district, which was based on the data from authorized Beijing Construction Committee. Thus, we employ floor area of sold commercial housing in 2006 to be housing demand in 2006. Annual Beijing Yearbook from Beijing Statistic Bureau is an authorized data source. We can collect economic, demographic, educational data from 2006 Beijing Yearbook. Moreover, we cannot collect transportation related data officially, such as road length in each district, so we should employ calculation methods to calculate the main road length in each district by use of GIS data, but with the limitation of full information on road GIS data in Beijing, we can't work out the road length in this study.

### 3.3 methods

Many forecasting techniques and approaches are applied to analyze and estimate housing demand for community. Conventional regression techniques have been used very often, including multiple regression models for quantity of housing demand (Hua, 1996), multinomial logit model and hybrid conditional logit model for community demand and location choice (Nechyba, 1998; Isaac, 2006). Artificial Neural Networks forecasting techniques has been proved to be more efficient for housing demand estimation in recent research (Hua, 1996). Housing demand from community choice has robustly spatial aspects, so GIS serves as the research platform both to manage spatial data and to imply spatial analysis methods (Can, 1998), can provide the optimal framework for investigating both types of locational factors in housing demand (Case, 1991).

In this study, we can only expect to use correlation analysis and comparison method to explore the degree of influence of determinants on housing demand for community, to find out the important factors that influent housing demand for community in Beijing and explain the relationship.

## 4. Results

### 4.1 Relationship between fiscal variables and housing demand for community

As stated, GDP per capita is a major index for community economic development. In 2006, Beijing's GDP per capita was up to 48.8 thousand Chinese Yuan (Beijing Statistic Bureau). The property investment was 171 billion Yuan, took 51 percent of the total fixed gross investment, the total floor area of sold commercial building in this year was 22.88 million square m<sup>2</sup>. However, GDP per capita in each district has not too much influence on housing demand for it. The correlation coefficient is only 0.040 ( $p=0.874$ ). *Xicheng* (core district) has the highest GDP per capita (102.6 thousand Chinese Yuan) in Beijing, but the floor area of sold commercial building was 0.41 million square m<sup>2</sup>. Inversely, *Chaoyang* (extension district) has 47.4 thousand Chinese Yuan but the floor area of sold commercial building was ranked the first 8.74 million square m<sup>2</sup>. Housing price and housing demand interact with each other. The price has lagged affect on demand, namely, last-period price determines the demand at this period in a certain region, and inversely, the demand can reflect price at the same period. However, the correlation coefficient between the floor area and price of sold commercial housing in 2006 is not significant ( $r=0.251$ ,  $p=0.315$ ). The figure 2 double illustrated their non-relationship.

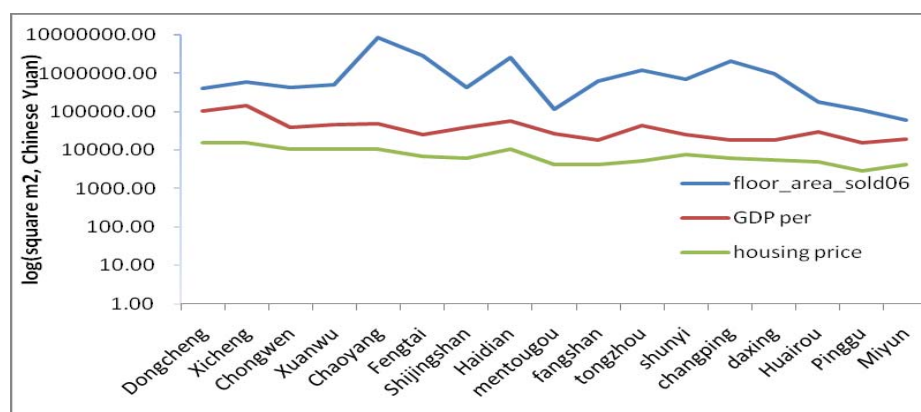


Figure 2. Comparison of floor area of sold commercial housing and fiscal variables (2006)

### 4.2 Relationship between local public services and housing demand for community

As the result from the latest housing demand survey showed, education and health facilities are important when people make decision among communities. Our analysis result also proved this true. Quantity of education facility has more significant effect on housing demand for community than education quality in Beijing. The correlation coefficient of middle school rate in each district is positively significant ( $r=0.735$ ,  $p=0.001$ ) but the coefficient for key school rate is weak and not significant ( $r=0.277$ ,  $p=0.265$ ). This result is different from the situation happened in western countries, the education quality has strong influence on household community choice. Health facility is another key factor for household housing decision making. The percentage of the second and third-class hospitals in each district has apparently positive influence on housing demand ( $r=0.522$ ,  $p=0.026$ ). In extension districts of *Chaoyang* and *Haidian*, the floor area of sold commercial housing takes 49.6 percent of total floor area sold in 2006, and around 23% and 36% of middle schools and high-quality hospitals (third and second class hospitals) are allocated in the two districts.

### **4.3 Relationship between accessibility and housing demand for community**

Transportation and job opportunity mainly determine that whether one community can attract more people to live there. Close to public transportation, trains, and main roads, it is convenient for residents to commute and to travel for daily life. Hence, Beijing's ring-road networks divide residential regions into five parts, and the area between the northern and eastern third and fourth ring-roads is more crowded by residential buildings. It was proved that people prefer to living near to workplaces because of the commuting time saving. The community with more enterprises will be more competitive for housing demand. The correlation coefficient of enterprises proportion with housing demand is 0.763. *Chaoyang* and *Haidian*, are two concentration districts for enterprises, with the percentage of 19% and 23%, and the real housing demand (floor area of sold commercial housing) in the two districts took up to 50 percent in the whole market. Proportion of universities is another significant determinant for housing demand ( $r=0.634$ ,  $p=0.005$ ). People who work in universities are most likely to buy housing nearby.

### **4.4 Relationship between demographic features and housing demand for community**

Population density can influence residents' living condition in communities, as bigger population can result in lots of socio-economic problems, such as resource shortage, heavy traffic, job competition, crowded shopping, low air quality and so on. However, the result of correlation analysis shows that even though there is a negative association between population density in district and housing demand in this area, it is very weak and not significant ( $r=0.037$ ,  $p=0.883$ ). Population education level in certain community has significant relationship with housing demand in this region. The proportion of 12-year-educated population (high-school education), the proportion of 16-year-educated population (under-graduate education), and the proportion of 19-year-educated population (post-graduate education) have significantly positive relationship with real housing demand in each district ( $r=0.890$ ,  $0.732$ ,  $0.464$ ,  $p=0.000$ ,  $0.001$ ,  $0.054$  separately). Figure 3 demonstrates this correlation in detail.

As the correlation coefficients of them ( $r=0.266$ ,  $-0.217$ ,  $p=0.287$ ,  $0.388$  separately) showed, disposable income per person and unemployment rate don't have much relationship with housing demand. Even though, we can also get implication that residents' income condition has a positive effect on community's attraction of housing choice. Namely, people would like to sort themselves into homogeneous groups within locations. The unemployment rate has the converse influence on housing demand.

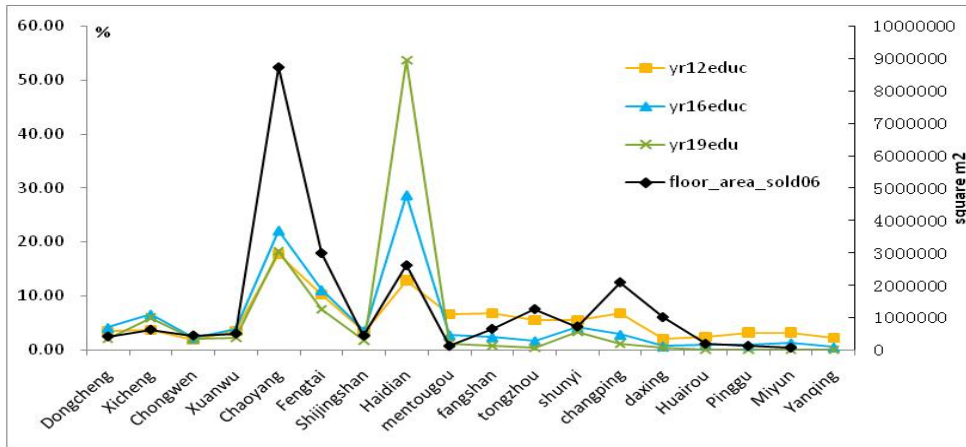


Figure 3. Relationship between housing demand and education level (2006)

#### 4.5 Relationship between built environmental features and housing demand for community

Air quality and entertainment (parks, etc) are major components of built environmental features of community. Good environment can bring high housing demand for community. Those districts with waste plants and factories are not ideal destinations for housing choice. Air Pollution Index (API) is an efficient index to measure air quality. In Beijing, *Mentougou* and *shijingshan* are two districts with worst air quality, and the APIs are up to 113 (light pollution), the floor area of sold commercial housing in the two districts are less than other districts. However, the air quality among districts doesn't have too much difference: the air pollution is the third level (light pollution) within core districts, extension districts and development districts. The biological conservation districts have better air quality but are too far away from core districts and not convenient to commute. Based on these reasons, the air quality doesn't have too much effect on housing demand for districts except for the apparently worst situation. The correlation coefficient of API and housing demand is 0.237 ( $p=0.344$ ), which is unreal to literatures stated.

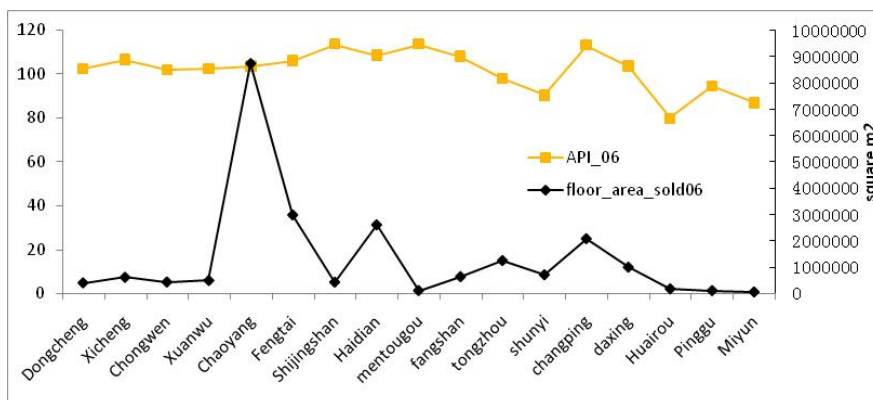


Figure 4. Relationship between air quality and housing demand in Beijing (2006)

#### 5. Conclusions

Different from these cities in developed countries, real estate market in Beijing is relevantly immature, and residents' satisfaction level is lower than people in western countries, thus housing demand for community is highly influenced by transportation and public facilities. From macro viewpoints to analyze housing demand for community, we can draw the conclusion the education facility has strongest effect on

housing demand for community. Children education is the important considered factor when people choose location for residence. Hospital quality is another important public facility to influence households' housing demand for community. Job accessibility is a vital factor people concern about during their housing decision. People tend to live where is near from workplaces. Hence, *chaoyang* and *haidian* are two crowded residential districts because of their high density of enterprises and universities. The result confirmed that in Beijing, residents' housing demand is inelastic and far to be satisfied, so people can't weight too much on physical and economic environment features of community.

However, there are a number of limitations in our study. Primary among these is the community definition. Here we set the administrative district as the community, the features of which are complicated and reduced the influence on housing demand. Land provision and housing supplying strategies significantly determined housing distribution among districts, so the influence of many driving forces on housing demand for community was undiscovered and the degree of relationship was reduced greatly, for example, the relationship of housing price with housing demand is weak in Beijing, which reflects that price is not the important factor when residents select housing between districts. Another limitation is data and variables. In Beijing, as for the confidential and sensitive reason, data about detailed air quality, safety and transportation is difficult to be captured. The variables about entertainments including parks, open areas, green lands were not concerned in this study because of the difficulty of data collection. Simple analysis method is the third limitation. We only employed correlation analysis to explore the relationship between the factors and housing demand for community separately, but their aggregative influence on the housing demand and the projection of housing demand were not conducted. The fourth limitation is that we only observe a snapshot in time and therefore cannot account for changes over time. Analysis from one year data cannot reflect or bring out the deep characteristics of relationship of these variables with housing demand.

According to the consideration above, in future research, more specific criteria should be approached for community identification and classification, and housing market sub-districts level will be considered as the communities. With comprehensive structure of variables, we will apply panel data with time-series feature to and predict housing demand in different community.

## 6. References

- Anas, A., 1982. Residential location markets and urban transportation. *Academic Press*, New York
- Anne C. Case, 1991. Spatial patterns in housing demand. *Econometrica*. 59 (4): 953-965
- Carol Rapaport, 1997. Housing demand and community choice: an empirical analysis. *Journal of Urban Economics*. 42: 243-260
- GohBee Hua, 1996. Residential construction demand forecasting using economic indicators: a comparative study of artificial neural networks and multiple regression. *Construction Management and Economics*. 14: 25-34
- Isaac Bayoh, Elena G. Irwin and Timothy Haab, 2006. Determinants of residential location choice: how important are local public goods in attracting homeowners to central city locations? *Journal of Regional Science*. 46 (1): 97-120

- John F. Kain; John M. Quigley, 1970. Measuring the Value of Housing Quality. *Journal of the American Statistical Association*. 65(330) 532-548
- McFadden, D., 1978. Modelling the choice of residential location, in: A. Karlquist, L. Lundquist, F. Snickars and J. Weibul, eds., *spatial interaction theory and planning models*. Elsevier Northholland New York
- Seong-Hoon Cho, David H. Newan and David H. Wear, 2005. Community choice and housing demands: a spatial analysis of the southern Appalachian highlands. *Housing Studies*. 20 (4): 549-569
- Thomas J. Nechyba, Robert P. Strauss, 1998. Community choice and local public services: a discrete choice approach. *Regional Science and Urban Economics*. 28: 51-73
- Yannis M. Ioannides and Jeffrey E. Zabel, 2003. Neighborhood effects and housing demand. *Journal of Applied Economics*. 18: 563-584
- Zhang Wenzhong, Liu Wang, 2002. Study on Spatial Location of Residential Buildings in Beijing. *City Planning Review*. 26(12): 86-89



## Study on the Impact of Accessibility on Housing Demand in Beijing

Longjuan HE<sup>1,2</sup>, Lihua ZHAO<sup>1,3</sup>, Dianting WU<sup>1</sup>

<sup>1</sup>*School of Geography, Beijing Normal University, Beijing, P. R. China*

<sup>2</sup>*Faculty of Built and Environment, University of New South Wales, Sydney, Australia*

<sup>3</sup>*School of Marketing, University of New South Wales, Sydney, Australia*

### Abstract

With the development of economy and urban expansion, Beijing's property market, especially the housing market developed extremely fast during the last decades. The housing prices are soaring dramatically, which reflects a high housing demand. The housing location selection is coincided with the spatial tendency of urban planning and infrastructures development, for instance, the construction of Olympic Park has lead the heating up of housing demand around it. The housing demand is affected more by neighborhood attributes than dwelling attributes, of which the accessibility of the home is a necessary important consideration in the housing decision. To make the further study on housing demand more meaningful, the purpose of our study is to illustrate the relationship between the accessibility to main infrastructures and the housing demand clearly and systematically by use of the spatial autocorrelation analysis and network analyst methods to calculate the accessibility.

Since the implement of Chinese open-door policy and market economy policy, the commercial housing system was carried out after the welfare housing system was canceled in 1988. The urban development policies and land use policies accelerated the corruption of old distribution of housing structure. On the other hand, the new complicated distribution structure brings up more mismatches according to the accessibility. Citizens are keener to live in a convenient neighborhood with connection to public transport, motorways, mega-parks, shopping centers and workplaces.

With the aim of drawing a detailed view on the impact of accessibility on Beijing property development, this paper will seek to classify and illustrate the impact of accessibility from different aspects, including public transport, workplaces, motorways, mega-parks and shopping centers, etc. Basing on the information of housing transaction records from 1999 to 2006, we suppose to use the Beijing Digital Map of Building and Land Use Information, Beijing Census data and urban planning to calculate and compare the impact of different accessibility on housing demand and the distribution of housing development. With the initial result, the influent degree and relative importance of each accessibility feature will be stated logically.

**Keywords:** accessibility, housing development, housing demand, spatial mismatch

# The Dispersed Regional Concentration: Emerging Extended Metropolitan Region in China

Yanting ZHENG

*Department of Geography, University of Hong Kong*

## Abstract

Almost 20 years have passed since the first investigation on regional *in situ* economic development, i.e. extended metropolitan region (EMR) formation was published. Most of the related studies focused on the functional features of the EMR, either on its economic transformation as a whole, or its feature of urban and rural mixture, which has often led to confusing with the concepts of megalopolis, desakota, or a cluster of cities. Setting out from a spatial perspective, this study has provided an alternative definition for the EMR concept: the EMR is distinctively a *dispersed regional concentration* with the involvement of the 'remote rural areas' into *in situ* industrialization as a response to globalization. Under this new and more restricted definition, traditional metropolitan growth is not considered as aspects of EMR formation. Additionally, the continuously dispersed feature distinguishes the EMR from the polycentric global city-region in the Developed Countries. Using China's matured EMRs, the Pearl River Delta (PRD) and the Yangtze River Delta (YRD) as cases, temporal and spatial analyses based on county-level demographic, economic and land use data have been conducted to verify this hypothetical spatial pattern of the EMR. We find that there is centripetal concentration in the EMRs in 1990-2000, which can be indicated both by population/net migration and by non-agricultural transformation of land use. This spatial tendency is found to be consistent temporally and spatially with their integration with globalization, and rapid economic growth and restructuring of their spatial units. Consequently, the spatial units within the EMRs have become wealthier and more non-agricultural in character, which have acted as a global platform as a whole, than the outside counties within the same province. Moreover, the designated rural areas within the PRD have also displayed regional concentration of population and migration, *in situ* economic development and restructuring, and global features more dramatically than those in the outside counties in the same province. Together with the land use dispersion index, the feature of regional continuously dispersed *in situ* development of the EMR has been verified.

Keywords: Global-city region, Extended Metropolitan Regions, desakota, regional urbanization, urban transition, globalization

Workshop on the Disaggregate Approach to Studying Urban Issues in  
China II

## **Modeling Institutional Constraints on Housing Preferences and Choices: Current Conceptual and Methodological Challenges Facing China Scholars**

**Zhilin LIU**

*School of Public Policy & Management, Tsinghua University, Beijing, 100084, P. R.  
China*

### **Abstract**

The past two decades have seen in urban China the gradual dismantling of the welfare housing system, the rise of a private housing market, and more importantly, the normative shift toward treating housing as commodity and investment. In this context, patterns of residential mobility and housing status have attracted a great volume of academic work. Whereas the bulk of literature has revealed the growing visibility of individual preferences in determining housing status, researchers also recognize a variety of institutional constraints that shape preferences and choices. Yet, most studies have stressed only the constraints resulting from the path dependence of the socialist welfare system (e.g. the work unit system, party membership, etc.). Much less progress has been made to model the ongoing but incomplete process of market building (e.g. redefining the role of government in housing in a market context) as a source of institutional constraints. This, I argue, is one of the key challenges preventing the Chinese housing literature from further theoretical dialogue with western literature.

This article attempts to address such conceptual and methodological challenge facing China scholars in the study of housing behavior and housing policy. Using a recently completed research design as an example, I discuss the conceptualization and measurement of institutional constraints in the emerging market economy in the study modeling residents' housing choices. In addition to the path dependence of the socialist institutions, I focus my discussion on: 1) institutional constraints due to an imperfect market, such as transaction cost, information asymmetry, limited housing supply (particularly in the segment of low-income housing), 2) government direct intervention, such as its action in promoting affordable housing provision, and 3) government's indirect intervention, such as regulation and tax and financial policies. This article advocates an explicit incorporation of an institutional dimension in housing studies in transitional China, and proposes a possible conceptual framework for addressing such methodological challenges.

# **Understanding Consumers' Housing Preferences and Aspiration: A Comparative Review of Two Research Approaches and Application to Urban China**

**Yizhao YANG**

*Planning Public Policy and Management, University of Oregon*

## **Abstract**

China's housing privatization is accompanied by changing attitudes toward housing and rising household prosperity. The notion of property rights, the increasing awareness that housing can serve as a consumptive symbol and an investment tool, and also the understanding of the role housing play in affecting quality of life all have contributed to an increased demand for quality housing. While the definition of quality housing varies significantly across different cultural and social contexts, there is a fairly strong agreement that consumers' opinions should serve as the foundation for determining what quality housing entails. Thus a good understanding about people's housing preference and aspiration is essential in making quality housing in China's housing market.

This article provides a comparative review of two approaches frequently adopted in Western housing studies about families' housing preference and aspirations and discusses the applicability of these two approaches to China's housing studies. One is the market approach, which lies on the premises of consumer rational behavior and fair market competition, and treats market prices or people's willingness to pay as indicators of housing preferences. The other is the residential satisfaction approach, which relies on people's perception and evaluation of their environments to judge the performance of housing environment and make inference about housing preferences. I compare the conceptual frameworks within which these two approaches operate, different analytical methods involved, and interpretations drawn from these two lines of inquiry. I also identify the theoretical and methodological gaps that scholars should be aware of when applying research methods developed in Western countries to China's unique context.

This article will be of use to researchers and practitioners on both public and private sides. For people on the public side, understanding the utility of those research methods and the limitations in research findings can be extremely important for determining housing development standards and evaluating the performance of publicly-subsidized housing projects. For people on the private side, information provided here is helpful to their market analyses and investment decision-making.

## **Challenges in the transport development in China's mega-Cities**

**Fengjun JIN**

*Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, Beijing 100101, China*

### **Abstract**

Based on the review of the development and problems of urban transport in China's Mega-Cities, the paper reveals several crucial challenges occurred in urban transport development: public and private transport conflict, urban and inter-urban transport connection, sub-urbanization and commuting transport issues and the mixture of automobile and bicycle traffic. The paper points out that these challenges are the core issues caused the present urban transport problems. Smoothly handling with these challenges is becoming the primary task for transport management institutions and this appears particularly important in Beijing preparation for the 2008 Olympic Games.

# **The Change of the Industrial Structure and Human Activity Spaces in Chinese Mining Cities**

**Yungang LIU**

*Center for Urban & Regional Studies, SUN Yat-Sen University, Guangzhou, 510275, China*

## **Abstract**

Since 1950s, many mining cities have emerged from large-scale resource development during the process of modern industrialization in China. The cities are holding a balance role in Chinese economic and social development as an important component of urban system. However, for many years, little achievement has been made on the research of them. On one hand it is due to little attention was paid, on the other hand it was difficult to access to the mining cities for physical and factitious reasons because of limitation available exoteric information of Chinese mining cities. Thanks to the Opening and Reformation policy, the opportunity to study mining cities comes.

This paper investigates the change in the industrial structure and human activity spaces in Chinese mining cities since 1950s. Utilizing the existed literature includes chorography, statistical and map datum, the author firstly identifies the category of Chinese mining cities and its distribution characteristics. And then the author choose Liaoyuan city, a colliery city located in Northeast of China, as a fieldwork case to investigate the Chinese mining cities.

This paper consists of three parts. The first part synthetically analyzes the general developing history, recent status and trends of the Chinese mining cities. In this part, a definition of mining cities based on the principle of "forming for mining" is proposed. According to the definition, 58 of 667 organizational cities are identified as mining cities. Because of the limited available data, only 40 organizational cities for which statistical data had been available until 1999 are closely examined. The mining cities composed 9 percent of all cities in China at the end of 1999. Their populations accounted for 14 percent of the entire urban population. The mining cities can be divided in terms of type of mines into colliery cities, oil-field cities, metal-mining cities, and nonmetal-mining cities. They mainly locate in the Northeast China and the Central China. The development of mining cities in the former part is however most prominent. On the other hand, although the statistical data indicates that the population size and the scale of mining cities development have been expanding since 1990, the growth rates of economic activities as well as population have been slowing. And the resource crisis, environmental pollution, unemployment, and poverty still accompany with the development of the mining cities.

Based on the part one, the second part presents a case study of Liaoyuan City. The author analyzes the actual problems of industrial stagnation, unemployment, poverty and environmental deterioration, as well as the change of human activity space caused by the problems presented above in detail. The result from Liaoyuan city denotes that, in recent years, the mining cities have become the main problem areas in China after Reformation. In Liaoyuan city, the whole industrial scale has developed unbalanced. The traditional kernel mining industry and its relatives are declining. It is curious that although the unemployment is sharply rising, the

expected population movement towards outside city has not occurred. On the other hand the differentiation of residence is increasingly evident. The wealthy social stratum live in the newly developing area, as contrast, the impoverished and unemployment people live in the mining area. Moreover, the habitation was destroyed because of the ground subsidence and other environmental problems in the old mining area. In this paper, the author analyzes the ground subsidence as an example environmental issue. Its status and damages were investigated through victim visiting. The author found that the environmental issue is localized to a small area gradually.

The third part probes into causation of the change of industrial structure and human activity spaces in mining cities. The author especially pays attention to the affection of *Danwei* regulation. *Danwei* that mean workplace in Chinese is basic unit of the production and life activity and plays multiple parts in not only the gross root department of Administration and Party, but also the basic activity space of citizens in China. The *Danwei* system is the most developed in mining cities. Therefore the *Danwei* regulation is important for the economic and social development. In this paper, the author shows the affection of *Danwei* regulation to the industrial stagnation, unemployment, environmental pollution and the change of urban human activity spaces. The industrial stagnation in recent years is because the reformation of *Danwei* regulation that has been implemented since 1990s in Chinese mining cities, but not because the resource depletion and production cost rise. For the same reason, the rationalization of the State and Collective *Danwei* caused serious unemployment problem. And because of the *Danwei* regulation, for example the *Danwei* welfare and the Family registration system, most of unemployment men still strand in the city instead of moving towards to the other cities. Moreover, the difference in the reformation of *Danwei* regulations also accelerates the polarization of human activity spaces. In addition, the government does not pay enough attention to the problems of mining area because they consider them as the interior matters of the mining *Danwei*.

In conclusion, the mining cities have become one of the main problem regions in China. The local area's poverty issues and environmental issues are challenge subjects. Through the case study of Chinese mining cities, this paper presents the urban sustainability and the mechanism of urbanization in the process of Chinese economic developing.

**Keywords:** mining cities, *Danwei*, human activity spaces, Liaoyuan city, China



# A Reactive Location-Based Service for Geo-referenced Individual Data Collection and Analysis

Xiujun Ma<sup>1</sup>, Zhongya Wei<sup>2</sup>, Yanwei Chai<sup>3</sup>, Kunqing Xie<sup>1</sup>

<sup>1</sup> Department of Machine Intelligence, School of EECS, Peking University  
Beijing, 100871, China  
Tel: +8610-62757085  
FAX: +8610-62756920  
Email: {maxj,kunqing}@cis.pku.edu.cn

<sup>2</sup> Department of Electrical Engineering, Tsinghua University, Beijing, 100084, China  
Email: [hze@mail.tsinghua.edu.cn](mailto:hze@mail.tsinghua.edu.cn)

<sup>3</sup> Department of Urban and Regional Planning, Peking University, Beijing, 100871, China  
Email: [chyw@pku.edu.cn](mailto:chyw@pku.edu.cn)

## Abstract

With the rapid advance in mobile positioning technology used by providers of location-based services (LBS), it is now more feasible than before to collect the geo-referenced individual level data. Furthermore, the online map services provide to the public with high quality map base and open API interface that are essential for easily integrate and analysis of human activity patterns. However, privacy is always an issue whenever personal location is traced and recorded. This paper proposes a reactive location-based service to collect and process individual location data by different privacy policies. The reactive LBS provides user with an active pull mode to collect his/her location information. With different privacy policies, the user can enter his/her current address manually to the server or automatically generated by the LBS location provider. In order to gain the accurate reconstruction of individuals' activity-travel patterns with considerable space-time details, the LBS server invokes an online map service to geo-reference the location data and to derive the route between locations. In this paper, a household's daily activity survey scenario is showed in Beijing city.

## 1. Introduction

Data about human activities and movements in space-time is important to many research fields in geography. More and more microsimulation models require good quality and fine granularity data feed of individual behaviour and space-time process (Arentze, 1997). However, this kind of data is difficult to collect and rarely available. Therefore, researchers often utilize alternative datasets, such as surveys, samples and synthetic data. Today, as the location of mobile phones can be precisely tracked in space, it is now more feasible than before to collect the geo-referenced individual level data using mobile phones (Mountain, 2001; Rein Ahas, 2005 ).

Location based service (LBS), provided by wireless operators, integrate geographical location and end-user context dynamically to deliver exact information at right place in real time (Adams, 2004). The massive spread of mobile phones and their social acceptance offer great possibilities of collecting and using data derived from LBS for scientists to research human behaviour in space-time. However, LBS derived data has

not yet been used much for studying the space-time behaviour for some reasons. The most important reason is the privacy and security problem of people. Mobile positioning has to be aware of personal privacy. People may not like to subscribe LBS for the fear of surveillance. To collect LBS derived data, it have to provide a good privacy policy that admit user to determine how and when he/she to be positioned. The second reason is that LBS normally can not record what the user is doing at a particular time, the purpose of the activity or trip, and other activities. Without these data, the usefulness of the LBS data will be limited for many research fields. Therefore, the LBS should provide an interactive mode for the user to record and link these data with the location data.

LBS can be classified into proactive and reactive LBS. A proactive LBS is a push service that the user receives information as a result of his or her whereabouts without having to actively request it. Proactive LBS normal requires a constant update of user' s locations that take up amounts of network resource and raise considerable privacy concerns. Reactive LBS, on the other hand, is a kind of pull service that a user actively uses an application to get information from the network. With reactive LBS, the user can decide how to be located and when, which gives the user a certain control about the personal privacy.

The objective of this paper is to introduce an approach of developing reactive LBS to collect individual space-time data with other information about activities and movements. In addition to get the information about the location coordinates of mobile users and its identification, it also can collect the user's activities and movement data in an interactive mode. The approach has three potential benefits for individual space-time data collection: (1) to collect the actual location and movement of people; (2) to improve both the quality and precision of this data; (3) it makes possible to work in real time.

This paper is organized as follows. Section 2 describes the methodology that was used to assembly various online Map Services API and to integrate multiple wireless operator's location service. Section 3 presents the proposed reactive LBS architecture and its implementation. An experimental individual geo-referenced data collection scenario is showed in Beijing city. The conclusion reports some findings of the proposed approach.

## **2. Methodology**

### **2.1 Assembly of the Online Map Services**

There are several famous online map services covered nearly all the world including Google Maps, Yahoo Maps, MAP24, MapQuest, Microsoft TerraServer and Google Earth. With these services, web uses can not only find various driving directions but also satellite images, topographical images, 3D images, and angled aerial photography. In china, there are also some excellent online map services, such as go2map, 51ditu, mapabc, mapbar. What is important is that Google Maps opened its API for the public, which enables developers to create new applications. After that, Microsoft, Yahoo and others online map services quickly followed to open its API. These maps' API can be a great resource for Transportation, Urban plan and other Sociology research.

The common features of these Online Map Services include mapping, geocoding, routing, POI (points of interest) searching, geotagging:

- Mapping: it provides powerful interactive maps and high quality map style for millions of visitors. It is a good infrastructure to display and visualize the georeferenced individual space-time data.
- Geocoding: nearly all map services provide a powerful geocoding engine to calculate a location's latitude and longitude coordinates, including street addresses and intersections, street blocks, postal codes, centers of administrative areas. Surveys about individual activities data contain lots of locations, those latitude and longitude coordinates can be calculated by the geocoding engine.
- Routing: this kind map API provides a robust routing API for calculating driving directions between two locations. The routing algorithms and high quality of road network dataset support for high performance routing. It can be used to validate and complete the survey about individual movement's data.
- POI searching: those map services normally have a very detail business and landmark database. Users can search locations by region by either category or name.
- Geotagging: map services provide tools for user to add map annotations using shapes or text. With this service, users participated in the survey about individual activity and movement may add their activities' 'footprint' on the map.

To assembly those online map services, it is more feasible to build an online individual space-time data collection system for millions visitors.

## **2.2 Combination with mobile positioning services**

Location based services, predicted by the market analysts as killer applications in the near future, have generated lot of interest and attracted many services providers. Today many GSM and CDMA mobile communication network operators have already implemented technology to determine the location of a mobile phone. Location technologies such as CELL-ID, E-OTD, OTDOA, and A-GPS have different precision in determining the location (Kupper, 2005). Most of today's LBSs depend on Cell-Id positioning, which is easy and cheap to implement, but delivers only very inaccurate position. However, to combine mobile network positioning technology and the satellite-based GPS system, the network-assisted GPS positioning method (A-GPS) is and will be the most precise positioning method of future (the accuracy falls in the range of 5–50 m). It is found that the precision of positioning depends on the density of the communication network. In large population area with dense network cells, the precision is more accurate than rural areas. In practice, although the precision of positioning is not very high today, it still enables the study of individual patterns of space-time movement.

Since the mid-1990s, more and more people have become owners of mobile phones. Now, mobile phone has become people's part of every day life. To combine with the mobile positioning service, it will become more feasible to collect the data about space-time movement of people than any other means.

## **2.3 Privacy policy**

Privacy is inevitable whenever one person's location being traced. The first rule for mobile positioning is that the location of a person may only be positioned with the permission of the person concerned. This principle is similar to other types of

questionnaires and surveys by phone, X-ray device, or mail. Therefore, it is very important to design a good privacy policy for collecting individual location data. With this policy, person being positioned must be able to control the dissemination of his/her location information in that it specifies to whom, when, and in which form it is made available to the data collector.

According to Cuellar (2002), a privacy policy is an assertion that a certain amount of information (identity or identifier plus location) may be released to a certain entity (or group of entities) under a certain set of constraints. Myles (2003) lists complete constraints for location privacy policies. Here we emphasize some important constraints in case of individual activities data collection:

- Identity constraints. Using identity constraints, we collect user's location information by using a pseudonym instead of its true identity.
- Time constraints. This constraint gives the user right to restrict positioning and location information access to a certain period of time. We can provide to the user with several ways to specify time constraints, such as by specifying predefined time periods and by explicitly activating and deactivating positioning.
- Notification constraints. With these constraints, the target can specify whether or not it wishes to be informed about positioning attempts or attempts to access its location information. We provide an interactive way for the user send and receive notification. Upon arrival of such a notification, it can authorize or deny positioning and access respectively.

### 3. The reactive LBS architecture

#### **3.1 System architecture**

Figure 1 gives a high-level overview of the system's architecture. The reactive LBS system consists of three actors: mobile positioning provider, map services provider, and the data collection server.

The data collection server is a website, which acts as a community portal from which all users to fill their own personal information and to display their space-time data. In order to use the LBS service, the website visitor has to fill in a short registration form which includes their mobile phone's number, personal information and privacy policy.

The mobile positioning provider is the mobile communication service of the network operator or the 3rd mobile positioning service provider. According to the user's privacy policy, whenever the user activating to sent space-time survey data by mobile phone, the mobile positioning provider gets the current location of the user and sends its position data with time to the data collection server. Mobile phone user also can send current activity content by SMS to the mobile positioning provider and then it will be sent to the data collection server too.

The map service provider is any online map service which opens its API to the public. It must have high quality maps of the survey area and powerful functions for geocoding the survey location data.

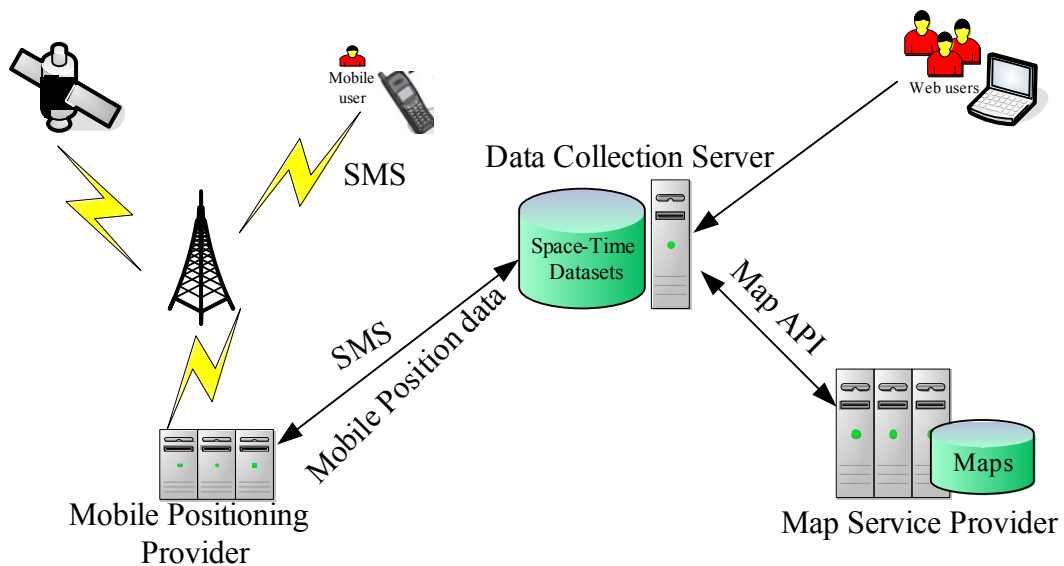


Figure1. The LBS system conceptual architecture

### 3.2 Data validation module

The data collection server has a data validation module to facilitate finding and correcting location entry errors during data collection process. In order to gain the accurate reconstruction of individuals' activity-travel patterns with considerable space-time details, the data validation module provides powerful capability to geo-reference the location data and to derive the route between locations. The data validation module is implemented as a series of scripts and can be plug-in new functions for space-time data validation. We give a data validation user case to present the data collection process as follows.

We propose a reactive LBS approach to collect user's space-time activity data. Users use an active pull mode to entry his/her current activity data by SMS (short message) to the system. The SMS text includes information about where the user is and what the user is doing. For example, a SMS like "shopping in shuang'an Mall Beijing". This SMS is sent to the mobile positioning provider. When positioning provider receives the message, it is activated to position the mobile phone user and generate a data entry 'userID, time, latitude, longitude, SMS string'. This data then is sent to the data collection server and the data validation module is activated to check and validate it.

First, the data validation module invokes the proximate searching Map service API to return a POI list near the location of the mobile latitude and longitude. Second, the data validation module parses the SMS text to retrieval the user's address text. Normally, the user address entry text is short and not complete. The data validation module matches it with the queried POI list. If it matched a POI, the data validation module returns the detail POI full address with latitude and longitude coordinate. If no any POI matched, the data validation module marks the entry need to be post checked. And then a detail data entry is generated as 'userID, time, mobile latitude, mobile longitude, full POI address, map latitude, map longitude, SMS text'. The data validation module can also generate the route data between the origin and destination which is always omitted by the user. After processed by the data validation module, a

full data entry will include full and complete details about location information. This can be used to the accurate reconstruction of individuals' space-time pattern.

#### **4 Scenario and prototype testing in Beijing city**

We implemented a reactive LBS prototype to collect people's personal activity data in Beijing city. China Mobile Communications Corporation is the biggest mobile network operator in china and opens its mobile location service to the 3rd SP service provider. According to its privacy policy, the SP provider can use its location service to positioning mobile phone user of china mobile. The SinoLBS company, a LBS SP of china mobile, provides us with a mobile location platform for the prototype test. We choose 51ditu and google maps as our online map service provider, because both of them open API to the public and have well map quality in Beijing city area.

##### **4.1 Geotagging daily trips on web map**

Now, there are more and more geotaaging web sites, in which web users can tag their photos and videos on web map. Flickr is a biggest photo sharing web site in US. After Flickr provided functions of geotagging photos on yahoo map, the statistic data showed that there are two millions photos being geotagged in one minute. Thanks to the popular of google maps and yahoo maps, millions of web users have already experienced to geotagg their information on web map. Therefore, we test to collect people's daily trips information using web map geotagging approach.

Geotagging is similar to the diary data collecting method for activity-based models. In this approach, we cannot position users, but the users are to record their daily trips. Thus there is no serious privacy problem for positioning users. Some activity-based models require data about information about activities, such as where, when, purpose, how long, with whom and with which transport mode. We implement a geotagging daily trips experiment using our LBS system.

In this experimental scenario, users are required firstly to register and submit some information about household and person. The household information contains respondent name, family size, car ownership. Personal information includes age, gender, status (worker, retired, student, etc.) and possession of a driver's license. And then, users are to tag their home, work place and favourite shopping and entertainment sites on our web map. After that, users can tag their daily trips. Each trip is a route tag on the map including information about purpose, time departure, origin and destination locations. Figure 2 shows the daily trip geotagging interface. Points on map are user's home, work place or other favourite site. Each line is a trip entry tagged by user. In this way, we can collect full spatial detail information about people's daily trip in accurate location.



Figure 2. The daily trip geotagging interface using google maps

#### 4.2 Blogging daily activities using mobile phone

Today, more and more people have experienced to participate and express their idea using mobile phone. For example, in the Chao'nu showing TV program period millions of people vote their favourite singer by SMS. We combine the mobile positioning with SMS to implement an experimental data collection about people's daily activities. In order to attract people to participate, we implement a LBS named daily activity blogging, in which people send their real time activity information by SMS and can share it to their friends and public.

The experimental scenario is as follows. Mobile phone owners subscribe our service, and agree to position them when they send activity SMS. According to the mobile positioning privacy policy of China Mobile, we do not trace any service subscriber's position and get the position information from china mobile's location platform only when we receives the blogging SMS.

In this experimental service, a blog consists of one real time activity entry including information about a user's on-going activity in a place. When our service receives the SMS text, it invokes the mobile positioning service to get the current position in latitude and longitude coordinates, and then invokes proximate searching Map service API to return a POI list near the location. The data validation module will validate its position accuracy and match the activity position to a POI map coordinates. Figure 3 shows the mobile positioning result and the validation result in our LBS system.

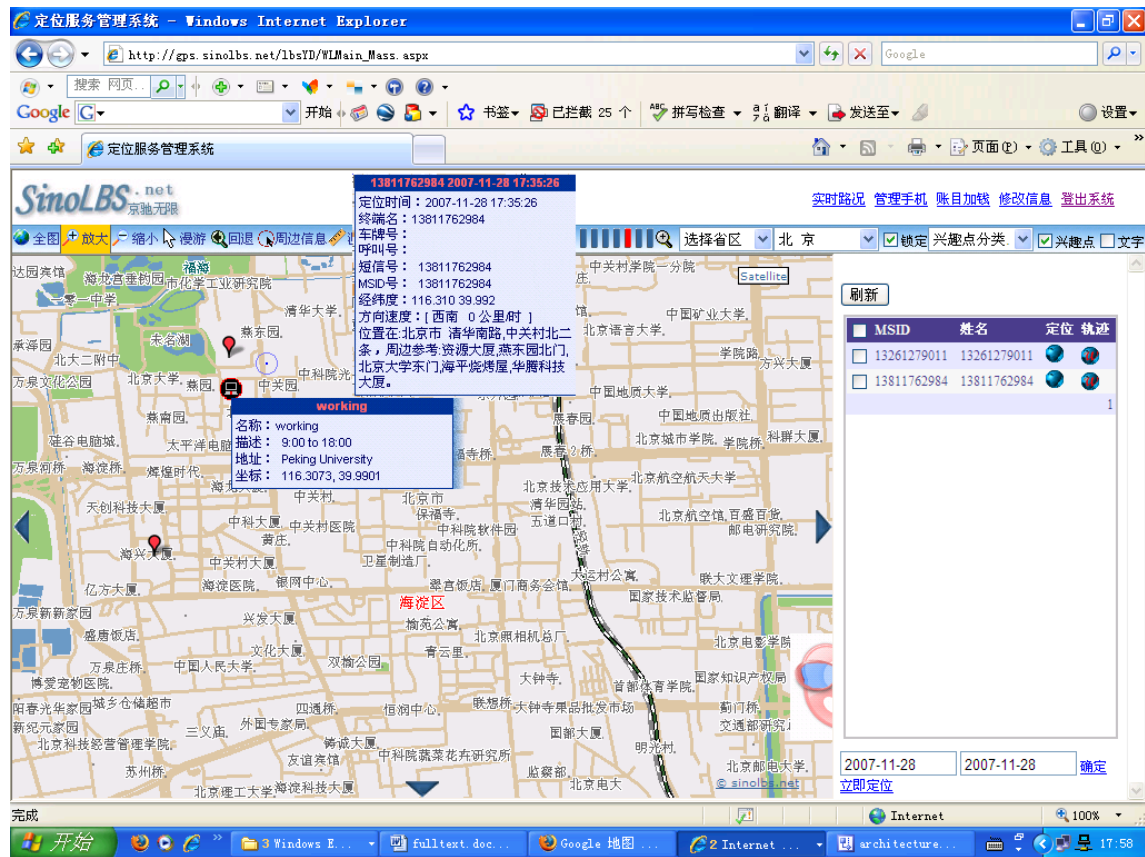


Figure 3. Daily activity blogging service

## 5. Conclusion

This paper shows the technical feasibility to implement a location based service for collecting individual space-time data. Building LBS on web map service can not only save great cost to build a map base, but can be accessed to millions of web users. And the mobile positioning platform provides great feasible to collect real time activity in space of mobile phone owners. To combine web map service API and mobile positioning service, it is possible to collect large scale space-time samples about millions users in big cities with lower data collection cost. Compared with traditional space-time data collection approach, the proposed LBS approach has three advantages: (1) geotagging and mobile positioning approach get the actual location and movement of people; (2) the data quantity and the precision are higher than traditional survey method; (3) data collection using mobile phone makes it possible to collect people's real time activities.

Although, we show the technical feasible of the LBS, there are a number of improvements to test the usability and data collection quality. In the future works, we will collaborate with researchers to develop more attractive services and to cover most of Chinese main cities. We continue to complete our LBS enabling new analysis and visualizing method for the collected large space-time datasets.

## 6. Acknowledgments

This work has been supported by the SinoLBS Company who provides the mobile location service infrastructure. This research is sponsored by NSFC project under



Grant 40671058, the Beijing Science Foundation under Grant 4062019 and China National Advanced Science & Technology (863) Plan under Grant 2006AA12Z217.

## 7. References

- A. Kupper. Location-based Services — Fundamentals and Operation. John Wiley & Sons, Aug. 2005.
- Adams, P. M., G. W. B. Ashwell, R. Baxter. (2004). Location-Based Services — An Overview of the Standards. D. Ralph, S. Searby (Eds.), Location and Personalisation: Delivering Online and Mobility Services. BT Communications Technology Series 8, Institution of Electrical Engineers (IEE), 43–58.
- Arentze, T., Hofman, F., Kalfs, N., and Timmermans, H. (1997). Data needs, data collection and data quality requirements of activity-based transport models. Proceedings, International Conference on Transport Survey Quality and Innovation (Transport Surveys: Raising the Standard), 24-30 May 1997, Grainau, Germany.
- Cuellar, J. R. (2002). Location Information Privacy. B. Srikaya (Ed.), Geographic Location in the Internet. Kluwer Academic Publishers, 179–208.
- <http://developer.yahoo.net/search/local/>  
<http://devnet.map24.com/index.php>  
<http://www.mapquest.com/>
- Mountain D, Raper J, Modelling human spatio-temporal behaviour: a challenge for location-based services, In: Proceedings of the Sixth International Conference on GeoComputation, University of Queensland, Brisbane, Australia, 24–26 September, 2001.
- Myles, G., A. Friday, N. Davies. (2003). Preserving Privacy in Environments with Location-Based Applications. IEEE Pervasive Computing, Vol. 2, No. 1, 56–64.
- Rein Ahas and Ular Mark. (2005). Location based services--new challenges for planning and public administration?, Futures, Volume 37, Issue 6, pp. 547-561
- [www.51ditu.com](http://www.51ditu.com)  
[www.flickr.com](http://www.flickr.com)  
[www.go2map.com](http://www.go2map.com)  
[www.google.com/apis/maps/](http://www.google.com/apis/maps/)  
[www.mapabc.com](http://www.mapabc.com)  
[www.mapbar.com](http://www.mapbar.com)

## Residents' Perspective on Livability Evaluation of Dalian

Wenzhong ZHANG, Li CEN

*Institute of Geographical Sciences & Natural Resources Research, Chinese Academy of Sciences Beijing*

### **Abstract**

The final estimators of city livability are urban residents. So their individual characteristics have direct influences on their evaluation. Based on large-scale survey data of the residents' degree of satisfaction with the livability situation in Dalian, this paper firstly analyses the basic characteristics of Dalian's livability from security, health, convenience, pleasure and facility, then the interrelationships between residents' individual properties and their evaluation on livability. The conclusions are followed:

Firstly, the local residents think the traffic system works very well, physical environment good and daily facilities convenient. However, they are not satisfied with the community work. Meanwhile, the survey result on security shows the residents are lack of disaster knowledge.

Secondly, the residents' degree of satisfaction is directly related to their income, family composition, education history and age. According to these properties, the residents are divided into four social groups, among whom the evaluation varies widely.

**Keywords:** Residents perspective, livability evaluation, satisfaction, individual properties, Dalian

## Neighbourhoods and Communities

# Ethnic Enclave of Transnational Migrants in Guangzhou: A Case Study of Xiaobei

Zhigang Li, Desheng Xue  
Centre for Urban and Regional Studies  
Sun Yat-sen University  
Guangzhou, 510275  
China

Michael Lyons  
London South Bank University,  
Borough Road, London, SE1 0AA,  
United Kingdom

Alison Brown  
School of city and regional Planning ,  
Cardiff University  
Cardiff, Wales, CF10 3XQ  
United Kingdom

## Abstract

Market reform and economic restructuring is reshaping Chinese cities. A spate of studies have examined the transformation of Chinese cities, few, however, is known about the sociospatial implication of globalization. This paper examines a newly appeared ethnic enclave in *Xiaobei*, Guangzhou. It targets on the enclave's sociospatial feature as well as its underlying mechanisms. Using questionnaires and interviews surveyed in 2006 and 2007, it found that Guangzhou's transnational social space is an outcome of 'globalisation from below'. Transnational migrants of *Xiaobei* come from West Africa and work as merchants, floating or fixed, trading products such as shoes, clothes and electronic facilities. As a result, *Xiaobei* is becoming a typical ethnic enclave featured by Black residents of both high mobility and socioeconomic diversity. The importance of locality is highlighted, such as Guangzhou's entrepreneurial tradition, religious history, and opened political-economic settings. It is argued that globalization adds a new dimension of sociospatial segregation, i.e. ethnicity, to Chinese cities such as Guangzhou.

**Keywords:** Transnational social space, African traders, Guangzhou, Xiaobei

## 1 Introduction

China, once a socialist country isolated by the West, is becoming a new world factory that markets products labelled 'Made in China' across the world. Through above two decades of market reform and open door, China has successfully embraced the global economy especially after its entry of WTO (World Trade Organization) in 2001. The extent of China's globalisation is presented by the unprecedented amount of the exchange of products, information and people between China and the outside world. The total import & export quota of China, for instance, has increased from just 115.4 billion US dollars in 1990, to 474.2 billion US dollars in 2000, and to 1760.6 billion US dollars in 2006 (Bureau 2007), ranking the second of the world, only after German.

Meanwhile, FDI (Foreign Direct Investment) pours into China - between 2000 and 2006, the total amount of FDI has amounted to 377.7 billion US dollars (Bureau 2007). In this way, foreigners, the eye-catching landscape of pro-reform China, are becoming more and more familiar to urban China residents. Between 2000 and 2006, for instance, foreign visitors of China amounted to 94.39 million, though the majority of them are Japanese, South Koreans, Russians and Americans (Bureau 2007). Some of them even become long-term residents of China, not only students or diplomats, but also traders, businessmen and pure residents. Shanghai, for instance, recorded a total of 119,876 long-term staying foreigners, and above 90% of them held residence permits in 2006 (Bureau 2007). As such, a reporter of Washington Post even argues that China now has become the first choice for international immigrants (Cha 2007).

Foreign accumulated communities, or so-called *Guoji shequ* (international community), *Waiguoren shequ* (foreigner community), has surged as a phenomenal landscape of post-reform urban China (Wen et al. 2005). *Wangjing*, a large scale commodity housing estate of *Chaoyang* District in Beijing, has become a South Korean enclave where above 60,000 South Koreans live, making it the largest South Korean village in Beijing (CCTV 2005). In Shanghai, it is reported that both *Gubei* in *Puxi* and *Huamu* in *Pudong* have become the major communities of international residents live. *Huamu*, for instance, houses around 5800 foreign entrepreneurial elites from across the world (Shen 2006). Consequently, China's openness to foreigners is evident in the re-emergence of ethnic enclaves. Not only in big cities such as Beijing, Shanghai, Guangzhou and Shenyang, but also in small cities such as Suzhou, Yiwu and Dongguan.

*'...Larger and more permanent than those frequented by expatriate businessmen on temporary assignment, the new enclaves evoke pre-revolutionary China, where cities such as Shanghai bustled with concessions dominated by French, British and Japanese...' (Cha 2007, Washington Post report)*

As a recent phenomenon mainly recorded by media, however, few researches have shed light on it. In terms of the three forces that shape contemporary urban China, i.e. market reform, migrants and globalisation (Logan 2001), the impact of former two forces have been extensively studied, the latter, especially the practical undertakers of globalisation, immigrants and their sociospatial implications, has been largely ignored (Wu and Webber 2004; Lin and Tse 2005). As such, this paper will target on *Xiaobei*, an ethnic enclave in Guangzhou, to fill the vacuum of researches in this filed. Also, since *Xiaobei* is an enclave of African Blacks, this study will also contribute to the literature of sociospatial segregation with a case study against the context of urban China, which has never been explored (Kempen and Ozuekren 1998; Marcuse and van Kempen 2002).

This paper will be organized as followings. First, the literature of transnational social space/ethnic enclaves will be explored. Recent theoretical perspectives upon this fresh issue will be examined. After that, it will focus on Guangzhou to understand the resurging of transnational social spaces/communities in urban China. As a major trading centre of China for above 200 years, Guangzhou can be representative to further decipher the restructuring of post-reform urban China, especially with respect to the impact of globalisation. After a general mapping of transnational social space in

Guangzhou, *Xiaobei* will be selected as the major empirical target. Using data obtained through two times of fieldwork surveys along with questionnaires and semi-structured interviews, it will disclose the features and sociospatial mechanisms of this specific ethnic enclave. Following that, discussions and conclusions will be further given.

## **2 Literature Review**

Transnational migration is by no means complete novelty in human history. During the construction history of the US, for example, millions of Europeans moved across Atlantics to explore the new continent. It is argued that cross-border movement of capital, people, goods, at the global scale existed long before the 19th century (Schwartz 2000). At the last two decade of the twentieth century, however, because of the revolutionary improvement of technologies in terms of communication and transportation, along with the transition of political ideology such as decolonisation and human rights, we enter a new era of 'borderless' world. As a historical continuation, globalisation per se has entered a new stage. Transnational practices, therefore, has risen to become a major issue of contemporary sociology, anthropology and geography. A number of novelty concepts such as 'transnationalism', 'transmigrants', 'transnational social field/social space/community', 'Diaspora' have initiated attentions upon the novelty of such new phenomena (Portes 1987; Portes 1996). 'Transnationalism', for instance, was defined by this pioneering group as 'the process by which transmigrants, through their daily activities, forge and sustain multi-stranded social, economic, and political relations that link together their societies or origin and settlement, and through which they create transnational social fields that cross national borders' (Basch et al. 1994; Gugler 2004). It points to the new group of migrants whose work family, social ties and identities are base on both their host country and home country. In response to the process of globalization, enterprises have been established by immigrants to export/import goods to and from their home countries; migrants maintain extensive social and cultural ties with more than one nation. By crossing national borders, transmigrants achieve the success of entrepreneurial activities through grasping the advantages created by national boundaries. In this sense, the grassroots cross border activities show a new type of globalisation featured by 'globalisation from below' (Portes 1996; Guarnizo and Smith 1998; Schiller and Fouron 1998). Moreover, it is argued that this model of migration at odds with the established models of migrants theories such as immigrant assimilation (Portes 1987; Zhou and Logan 1991). The notion of transnational migrants extend the research of globalisation from the prevailing paradigm of macrolevel discourse such as 'time-space compression' (Harvey 2000) and 'the end of the nation-state' to the microlevel to examine the complex constitution of the people who develop their own strategies against the uneven geography under globalisation (Smith 2001; Lin and Tse 2005).

The literature of transnational migrants, however, preoccupied with the single case of the US (Waldinger and Fitzgerald 2004), mainly focus on the transmigrants crossing borders between the core and the peripheral nations. On the one hand, most transnational social spaces appear in developed countries such as the UK and the US, since migrants, under 'push and pull', move traditionally towards these countries; on the other hand, it is enclave economy, beyond the dual or segmented capitalist labour market of primary and secondary sectors, that make the enclave alive (Wilson and Portes 1980), whilst such an economy appear exclusively in developed nations in

history. Accordingly, there is a big vacuum of studies upon this phenomenon in other nations. Especially, though the nations of transitional economy embrace the West in the 1990s, while the residential control upon foreign migrants is loosened, few empirically studies have been conducted to look closely at the rising number of transnational immigrants.

As one of the top economies of the world, China is undergoing remarkable transformation featured by both urbanisation and globalisation (Song and Timberlake 1996; Shen et al. 2002; Zhou and Ma 2003; Wu 2004). However, little is known about the spatial implication of transnational migrants in Chinese cities. As China gradually opens its door towards outsiders, its advantage especially in terms of the cheap price of manufacturing sectors has attracted traders across the world. Though rural migrants and their enclaves such as *Zhejiangcun* (Ma and Xiang 1998) and *Chengzongcun* (Zhang et al. 2003) have been extensively studied, few is known about the so-called international migrants (*Guoji yimin*). Although a vast literature has been involved in the debate upon market transition, few studies have ever put ethnic economy into consideration (Kim 2003).

In terms of the spatial restructuring of Chinese cities (Ma and Wu 2005; Wu et al. 2006; Wu 2007), though a number of studies have engaged in the exploring of social space or communities issues, transnational social space has only recently been noticed (Kim 2003; Wu and Webber 2004). In Beijing, for instance, it is found that the newly established sector of commodity housing provides foreign housing though built them into gated communities. And such foreign housing projects are mainly clustered in the north-eastern area of the city, along the highway leading to the airport (Wu and Webber 2004). It is claimed that the construction of such gated communities will exacerbate residential segregation of post-reform urban China. Nevertheless, little information has been given out about the people who live in these foreign enclaves. In Yanji, a border city at the north-eastern corner of China, 449 ethnic Koreans are surveyed and it is found that working in the Korean enclave economy is positively associated with significant earnings advantage, whilst ethnic sectors typically attract those who lack substantial human capital required for entering 'mainstream' (state-owned) labour markets (Kim 2003). Little, however, is known about the sociospatial implication of these ethnic enclaves.

As such, this paper will use Guangzhou as a case to examine the sociospatial implication of the new arrivals, transnational migrants and their social space, in Chinese cities. In order to dissolve the mystery of the property of these transmigrants, the focus will be concentrate upon their composition and their functional social networks. Moreover, since most transnational migrants of Guangzhou are African Blacks, the classic issue of sociospatial segregation will also be mainly concerned.

### **3 Transnational ethnic enclaves in Guangzhou**

As the starting point of Maritime Silk Road, Guangzhou is always one of the most important foreign trade cities of China during the last 2000 year history of the city. *Shisanhang* (Thirteen Hongs), the famous treaty port at the end of Ming Dynasty, for instance, has made Guangzhou the only city for China's export trades. After the foundation of the PRC (People's Republic of China), Guangzhou has been in the leading city in opening and absorbing foreign impacts. Plus its advantaged geographic location as neighbouring both Hong Kong and Macao, and situating in the centre of

PRD (Pearl River Delta) - the new world factory, Guangzhou is permeated with overseas-founded enterprises and is chosen by foreigners as the first station to Chinese business fields. Initiated as early as 1957, CECF (Chinese Export Commodities Fair), two times a year, one in spring and one in fall, has been holding in Guangzhou, which allures numerous foreign businessmen. After China joined in WTO in 2001, the scale of foreign businessmen soared up, especially after the fair adjusted as CIECF (China Import and Export Commodities Fair) to hold both import and export functions in 2006. As the 100th CECF, the CIECF has seen around 190,000 foreign traders from above 200 countries and areas, the contracts of which amount to about 34 billion US dollars.

Supported by the superior geographical condition as well as entrepreneurial locality, the economy of Guangzhou has maintained high increasing rates for the last two decades. Alike other PRD cities, Guangzhou attributed its success largely to an export-oriented economy. In details, most of Guangzhou's export commodities are light industry products. Between 2002 and 2005, for example, 75% of the export value of industrial sectors of Guangzhou stem in textile industry. Through Guangzhou, millions of garments and shoes produced in the PRD or YRD (Yangtze River Delta)-the other world factory of China, export to countries across the world. Therefore, the export amount of garment and shoe products ranks the top two among all other export products (Table 1).

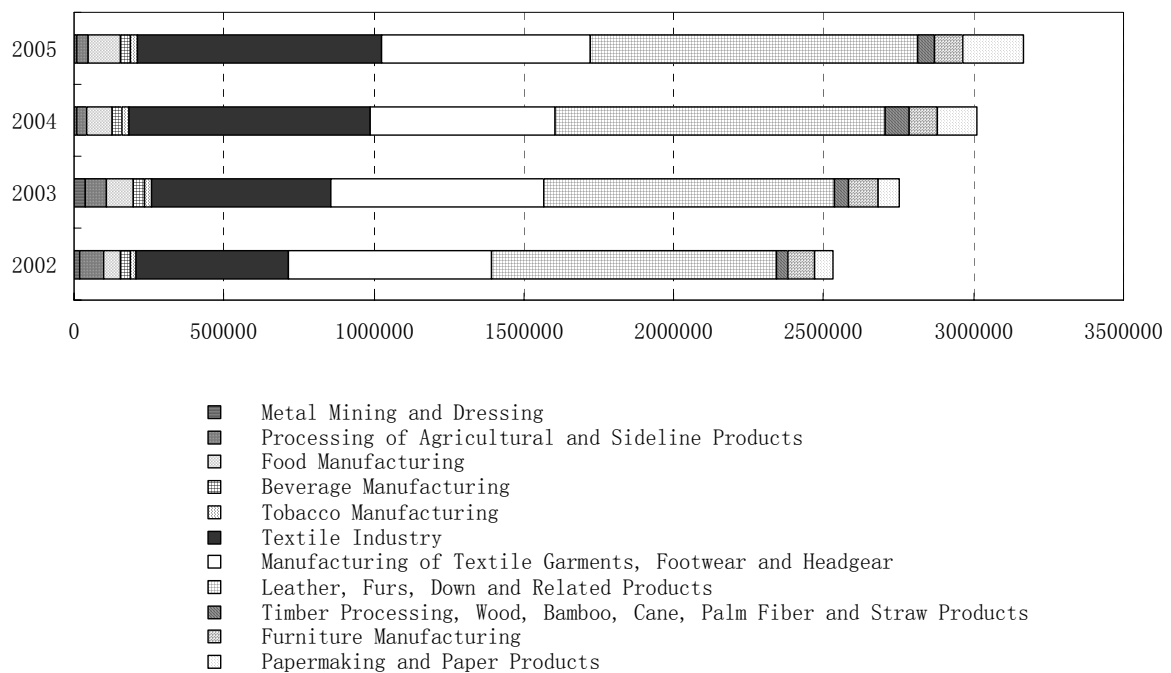


Figure 1 Export of the industrial enterprises of Guangzhou, 2002-2005 (RMB yuan)

Table 1 Top ten export commodities of Guangzhou, 2004-2005 (Unit: 10,000 USD)

	2004		2005	
1	Garments and Clothing Accessories	234,434	Garments and Clothing Accessories	294,962
2	Automatic Data Processing Machines	194,182	Automatic Data Processing Machines	243,400



3	Footwear	104,384	Textile Yarn, Fabrics and Related Products	122,124
4	Textile Yarn, Fabrics and Related Products	101,961	Footwear	113,551
5	Jeweler of Precious Metals or Rolled Precious Metals	70,347	Pearls, Precious and Semi-precious Stones	81,311
6	Pearls, Precious and Semi-precious Stones	70,031	Printed Circuits	78,802
7	Printed Circuits	54,099	Jeweler of Precious Metals or Rolled Precious Metals	77,109
8	Parts of Automatic Data Processing Machines	52,872	Parts of Automatic Data Processing Machines	66,860
9	Travel Articles, Handbags and Similar Containers	44,951	Furniture	58,041
10	Furniture	43,572	Travel Articles, Handbags and Similar Containers	50,900

(Data source: GSB, 2005, 2006)

The growth of Guangzhou as a trading centre of the world therefore attracts the massive in-flow of foreign businessmen and visitors. Alike the West, it lacks of official statistics for permanent or temporary foreign residents, but existed data can still indicate the scale of the increasing of foreign visitors (Figure 3). For instance, it is reported that Asian tourists, the main body of foreign visitors, see the keep rising of their numbers along with people from other continents, the total of which has aggregated to above 17 million till the end of 2005. Particularly, the number of African tourists has risen up from 6,358 to 31,766 over the period from 2000 to 2005, an annual increasing rate of 37.9%, far surmounting the rates of other areas (11.5% on average). A report from Border Administration Office points out that there are 15,000 long-term foreigners reside in Guangzhou, whereas the transitory foreign visitors sum up to around 500,000. According to the Ministry of Public Security, there were 30,819 foreign people, excluded people of Hongkongese and Taiwanese, reside in Guangdong Province. In addition, it is estimated that foreign residents of Guangzhou and Shenzhen account for 70% of those in PRD. So that there will be around 15,000 foreigners reside in Guangzhou. Moreover, according to a report of the Public Security Bureau of Guangzhou, long-term foreign residents in Guangzhou amount to 18,000, of which African, Middle Eastern, European or American and Asian account for 6%, 6%, 55% and 34%, respectively (Agency 2006). In this sense, there would be around 1080 African residents of long-term living in Guangzhou. Nevertheless, this figure is far below the record of staying-overnight African visitors, 31,766, in 2005, collected from hotels and restaurants.

In Beijing, it is found that foreign housing is mainly developed into two types: apartment complexes which offer high-rise living; and villa compounds which are low-rise, spacious, and usually contain individual gardens (Wu and Webber, 2004). Likewise, Guangzhou's transnational social space is also mainly composed of such

two types of buildings. In *Huanan xincheng*, a suburb commodity housing estate of south Guangzhou, for instance, hundreds of foreigners live in high-rise apartments of above twenty floors. In *Ersha Island*, however, foreign residents live in western-style villas with high quality of designs. Though foreign residents can be found in nearly every districts of Guangzhou, transnational social spaces accumulate and can be mainly identified in five sites (Figure 4).

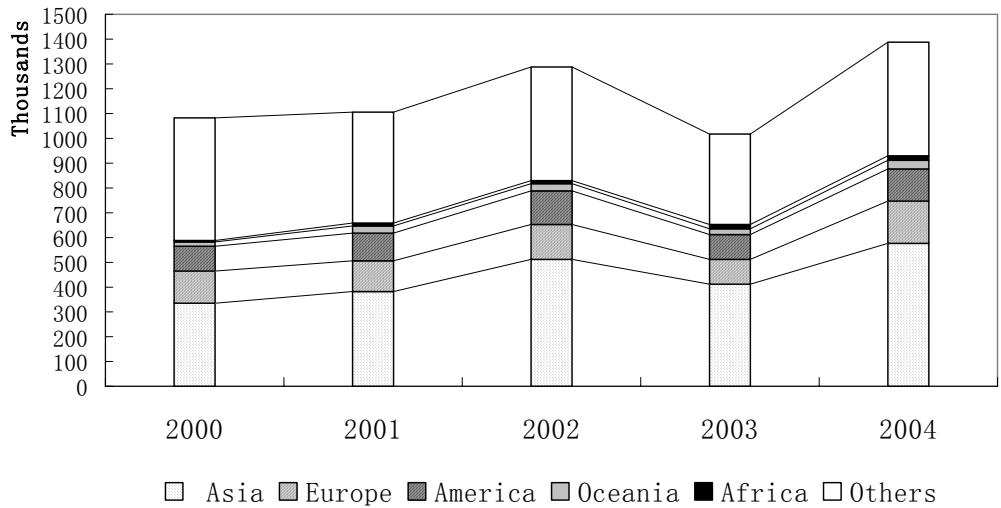


Figure 3 Foreigners staying overnight in Guangzhou, 2000-2005 (Unit 1,000 persons/times)



Figure 4 Immigrants accumulation sites in Guangzhou (Sources: Survey 2006)

The first site is ‘*Sanyuanli*’, the central part of *Baiyun* District that surrounding the *Sanyuanli* village, the inner suburb of Guangzhou in history. After the expansion of the city in the 1990s, the whole region has been largely urbanised through intensive

industrialisation and commercialisation. This site is composed of several separated residential estates, such as *Jingui* Village, *Jinchang* Road Community, *Jiaoshi* New Village, and so on. It accommodates around several hundred Black migrants, mostly African Blacks running businesses of shoe or clothing. Moreover, Koreans dedicated in the Chinese-Korean trade also have been gathering in this site in recent years. *Xiaogang*, a suburb community about the Airport Highway, has become a 'Korean Village' in the late 1990s. Normally, transmigrants here rent commodity housing within the communities of Chinese, though Blacks sometimes rent the cheap flats of *Chengzhongcun*'s villagers.

The second site is '*Huanshidong*' (East *Huangshi*), referring to the area around a street with this name, sitting in *Yuexiu* District and centralizing *Huanshidong* Road (East Circle Line). Transnational migrants here mostly reside in stretch of buildings such as *Xiushan* Building, Garden Hotel, or within the buildings beside the roads of *Taojin* Road, *Jianse* NO.6 Road, *Jianseda* Road, and so on. Beyond some missionaries working in international institutions such as the British Council or the Embassy of Japan, as they rent offices within office buildings such as Guangdong International Grand Hotel, most international migrants here are African traders. They accumulate in either high-rise apartments such as *Xiushan* Building, *Taochi* Building, *Tianxiu* Building, or local hotels such as *Dengfeng* Hotel, *Dengyue* Hotel, or office buildings like *Yisheng* Building, *Hengjing* Building, *Hengsheng* Building, *Guolong* Building and *Yongyi* Building. Nevertheless, the ethnic compositions of transnational migrants within these buildings are by no means the same. Traders in *Xiushan* Building, for example, varied markedly in terms of the places they come from, covering France, India, Arabic counties, African countries and so on, whilst the tenants of *Taochi* Building and *Tianxiu* Building are almost all from African nations. After 1980, *Huanshidong* is the first among the five sites of Guangzhou to accommodate transnational migrants, also it has become the most renowned site of these novelty landscapes of the city.

The third site is *Tianhebei* (North *Tianhe*), the newly developed CBD within *Tianhe* District. International migrants here mainly live in buildings within the stripes of *Tianhe* Road, *Longkou* West Road and *Linhezong* Road. After 1987, this site experienced a tremendous construction under the ambitious to become Guangzhou's new CBD. With its promising future, this site successfully magnetized a large flow of business elites in the early 1990s. As a good example, the 80-floor Civic Plaza, contains tens of enterprises of the world's 500 most influential brands, along with international institutions such as the Consulate of Italy and Malaysia, and other international organizations like Hong Kong Economic and Trade Office in Guangdong. Moreover, hospitable apartments within the two 38-floor buildings of the Civic Plaza accommodate hundreds of managers of international corporations such as Korea and Japan. So the majority of international migrants of this site are entrepreneurs and professionals working in either transnational companies or joint ventures.

The fourth site is *Ersha* Island, an island, within the middle of the Pearl River, of south *Yuexiu* District. The island is famous for its gathering of business senior personals especially overseas managers. Holding one of the most desirable locations of Guangzhou, *Ersha* Island, facilitated with well-equipped infrastructure such as *Xinghai* Odeum, top-class restaurants and bars, has recently been built into a high-

class community of mainly villas, featured by advanced cottage reclamation. Accordingly, senior managers of transnational companies move into the island in the last decade, making a phenomenal enlargement of the population of international elites. In fact, along the riverside of the Pearl River, thousands of high-rise apartments of high quality have been constructed during last decade. Because of the high rent or housing prices of these housing, only the new rich, such as enterprise bosses, Hongkongese, or transnational migrants from overseas can afford. Accordingly, it is by no means unusual to have neighbourhoods of Whites or Blacks within these communities. To the north of *Ersha* Island, Pearl River New Town, for instance, has witnessed the rising of senior business managers advancing for its exquisite commodity housing estates, such as the so-called 'Edinburgh International Apartment'.

The fifth site is '*Dashi*', which situates in the north *Panyu* District, sitting to the south of Guangzhou. After Guangzhou enlarged its administrative boundaries in 2001, the amount of large-scale commodity housing estates, like *Qifu* New Village, *Bigui* Garden, *Huanan* New City and *Lijiang* Garden, began to mount up in the south suburbs of Guangzhou. Equipped with humanistic facilities, schools, and hospitals, each of these large-scale estates can accommodate residents of above 10,000. Through arresting white-collars, communities in *Dashi* turn the site into an international habitat for people coming from Middle-east and West Asia countries. For instance, *Lijiang* Garden accommodates around 300 migrants of Middle-east countries. In the early November, 2007, the authority of *Lijiang* Garden even proposed to set up a specific region only accommodates foreigners.

In addition, housing or firms run by transnational migrants distribute sparsely in selected sites of the city, i.e. *Fuli* Peninsula, *Taojin* Garden on *Taojin* Road, American Bank Centre on *Renminzhong* Road, *Lujingya* Garden on *Lujing* Road, as well as in the office buildings or residential communities in *Yaotai*, *Tongdewei*, *Lizhiwan* Square, *Yian* Square, *Yifu* Road, *Zhanqian* Road and *Dongfeng* West Road. Nevertheless, the five sites mentioned above represent the most remarkable zones of transnational migrants in Guangzhou. Not only high-class elites such as managers or embassy officials, but also general Blacks, transnational migrants move into these sites, accumulately or sporadically, initiating marked restructuring of the local community. Along with different skin-colours, they also added Guangzhou different languages, foods, dresses, lifestyles and cultures. Under globalisation, the sociospatial structure of post-reform Guangzhou is further diversified (Feng and Zhou 2003).

Nevertheless, the process of the transformation does not promise the appearance of transnational ethnic enclaves. Among these five sites, only *Huanshidong* can be labelled as ethnic enclaves as it is only there that African traders typically reside and work, and only this site is well-known to be taken as Black enclaves by most Blacks, Guangzhouese, researchers, officials or medias. More than often Black traders rent high-rise apartments while running business at the same place, so as to avoid tax charge, registration or other governmental administrations. Nonetheless, few are known about these people, let alone the knowledge of their transnational behaviours, social networks or ethnic institutions. Alike other cases of 'globalisation from below', however, the development of transnational social space in China indicates the colourful dynamics of globalisation, and so that a case study of transnational Blacks in Guangzhou will further expand our knowledge not only upon urban China, but also

upon globalisation per se. As such, the following study will try to excavate knowledge of this transnational ethnic enclave through taking in-depth fieldwork surveys in *Huanshidong*, and to understand its sociospatial mechanisms through look closely at both the ‘African Tribe’ and local people.

#### 4 An empirical study: *Xiaobei*

##### 4.1 Research design

As a road situates in *Hongqiao Street*, *Yuexiu District*, *Xiaobei* is surrounded by plentiful high-rise apartments - though the bottom of which normally are shops, such as *Tianxiu Building*, *Xiushan Buiding*, *Taochi Building*, and *Guolong Building*. *Xiushan Building*, for instance, is an apartment containing about 200 houses, whereas half of them are owned or rent by Blacks or Arabs. In *Xiushan Building*, *Tianxiu Building* and *Guolong Building*, there are over 400 Black residents who come from 52 different countries. For the new comers, *Tianxiu Building* is their first choice. The location of *Xiaobei* is the main factor that moulds the development of the ethnic enclave (Figure 5, Figure 6). First, it is in walking distance to a series of transportations, such as the Airport Express Line, Guangzhou Railway Station, Guangzhou Metro and a couple of coach stations. *Tianxiu Building*, for example, is only 3.5 kilometres away from Guangzhou Railway Station, and less than five kilometres, linear distance, to *Liuhua Fair Centre*. Second, *Xiaobei* is approaching pairs of goods distribution centres such as ‘*Zhanxi Watch Wholesale Market*’, ‘*Liuhua Cloth Wholesale Market*’ and ‘*Baima Cloth Wholesale Market*’. In addition, although the rent of *Xiaobei* has rocketed to 6000-7000 RMB yuan per month in 2007, the rent cost of houses of *Xiaobei* is still equal to Guangzhou’s average level. All these therefore offer attractive conditions for the Black traders.



Figure 5 Xiaobei and its surroundings



Figure 6 Xiaobei and its landscape

In Jan-May, 2006 and March, 2007, we carried out a series of surveys including questionnaires and semi-structured interviews that target on Black traders, mainly within *Tianxiu* Building and the surrounding areas such as restaurants and bars. From Jan to May, 2006, a preliminary investigation was conducted. Through random sampling, we sent out 80 English questionnaires, reclaimed 52 and qualified 43. The reclaiming rate was low, for the reason that most of the traders run business without any official registration and some even are ‘Three-Illegal-People’ (*sanwu ren yuan*) (illegal to disembark, illegal to reside and illegal to run business), so that some people will behave repelling to the investigation. Through preliminary investigation, we found out that a large proportion to the African Black people used French, which elevated the difficulty of the survey. Meanwhile, a total of 40 questionnaires directed at the local residents living in communities of *Xiaobei*, of which 35 are reclaimed as valid. The investigation in this phase was focused on collecting the fundamental information of the migrants, such as nationalities, living conditions and business properties. Besides, three asking questions such as ‘would you like to live with Chinese neighbourhoods’, the relations between local residents and Black migrants were also concerned. In 2007, with the approach of semi-structured interviews on the group from the same locations, we interviewed 46 Black traders and two local businessmen, talking about aspects like economic and housing conditions, social networks, experiences or histories of transnational behaviours, and so on. The aim was to further understand the relation between their social networks, sociospatial rationales, and so on.

#### 4.2 Transnational African Traders of Xiaobei

Most housing of *Xiaobei* is gated communities of high-rise apartments, the same as foreign housing in Beijing though the first two floors are often used for commerce in Guangzhou (Wu and Webber 2004). Before 1997, however, few housing of *Tianxiu* Building could be rented. Since *Xiaobei* was close to the periphery of the city centre, the renting fees here were lower than the city centre. High housing vacancy rate plus low rental lever contribute to the transnational traders' gathering. The local residents, however, are mainly general Guangzhou residents. The 5th census in 2000, for instance, demonstrates that residents living in *Xiaobei* obtain an average educational attainment of junior high school level (46%). Since 1998, large scale of African businessmen began to rent apartments in *Sanrong* Building, *Qiaofu* Garden, *Xiushan* Building and housing on *Taojin* Road and *Kangyuan* Road. Thereafter, the congregation of African residents in *Tianxiu* Building became conspicuous and an ethnic enclave featured by the accumulation of Black traders within scatter high-rise apartments came into shape.

*Tianxiu* Building, as a typical case, situates at the crossroad of *Huanshi Zhong* Road (Central Circle Line) and *Xiaobei*. With a short distance to the Guangzhou Railway station, just ten minutes by feet, *Tianxiu* building was built into a high-rise apartment of 36-floors, containing three high-rise apartments (namely A, B, C), in 1995. The space of the first to the fourth floor is designed as commercial areas, apart from which, 70% of the rest of *Tianxiu* Building-over 600 office compartments - are dominated by Middle Eastern or African traders. The rent of *Tianxiu* Building is around 38-48 RMB yuan per square meter, while the management cost is around 9 RMB yuan for each square meter.

The pedestrian flow of traders in *Tianxiu* Building amounts to 700 people (or times) per day, though during CECF, the number would be much higher. The survey indicates that Black people in *Tianxiu* Building mainly come from Central African and Western African countries, especially the latter (Figure 7), such as Mali, Togo, Gambian, Guinea, Ghana, Senegal and Congo, i.e. the seven golden coastal countries. In fact, these countries have maintained a rich commercial tradition since the 15<sup>th</sup> century. Like other African countries, these countries accelerate their trade with China in textile and electronic products after 2000. Since these countries enjoyed a flourishing commercial prospect as the centre of trading in Africa, the retail-trade between China and Africa urges businessmen of these countries to Guangzhou.

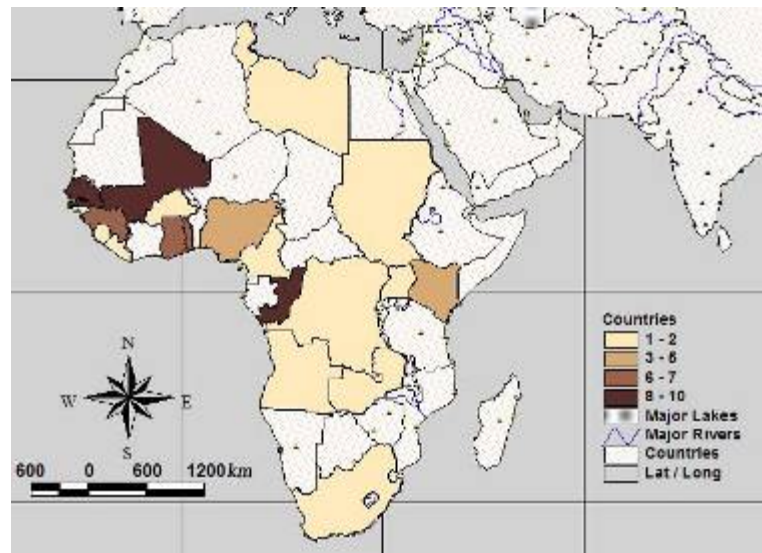


Figure 7 The nationalities of Xiaobei's African traders

Among the interviewees, 70% are male and 30% are female. It is known that African countries hold very different attitudes to the role of women in the economy. On the one hand, countries such as Ghana traditionally take women dominate market trading, so that over 90% of the business trade is run by female. On the other hand, for Moslem countries like Tanzania, women play a subdued economic role. Since the Africans living in *Tianxiu* Building are mainly Muslims from Mali, Nigeria, and Kenya, it is no wonder that there are few females in the sample. In addition, since most Black residents of *Tianxiu* are Muslims, the religious traditions play a important role to build close connections among the traders. During the Ramadan, for example, the Blacks would share spacious office to worship; the number of participants sometimes can even reach above one hundred. In fact, like *Quanzhou* City in Fujian Province, Guangzhou holds a long history of Islamic culture. For example, Huaisheng Mosque of Guangzhou, a Muslim temple built in the Tang Dynasty, has been a religious centre of both Chinese and international Muslims for hundreds of years. The survey reveals that Black traders of *Xiaobei* has a median age of 32 (SD = 7.09), which means that the main body of these transnational migrants are young adults. At the same time, 33% (16/48) of the interviewees has established families, but very few of them (2/48) bring their spouses and children to Guangzhou. This can be largely attributed to the frequent mobility of these migrants. Like transmigrants in the US, most Black traders of Guangzhou travel across the borders of China and their homelands regularly. Interviewee No.16, a Malian man, for example, visits Guangzhou every two or three months in the last decade. Interviewee No.1, from Uganda, comes and stays ten days in Guangzhou every two months.

A majority of Blacks in *Xiaobei* speak Arabic and French, while only a few can speak English. As for their level of education, 16% of the sample chose 'less than 6 years', 43% chose '6-9 years', 23% chose '10-12 years', 18% chose '13-16 years' (Figure 8). It turns out that most of the Black traders have an educational attainment of about junior high school level. As for their occupation, the majority of the sample refers themselves as 'Businessman' (Business, exporter, importer, or wholesaler), though a few labelled themselves as liberal professions or housewives.



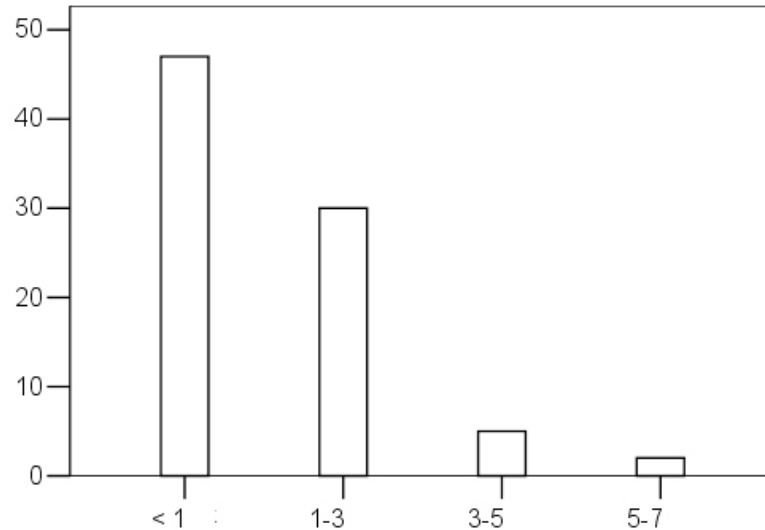


Figure 8 The living time of Xiaobei's African traders

As for the length they reside in China (Figure 8), over 90% of the sample began to live in Guangzhou after 1998; about 56% of the sample has never lived above one year persistently in Guangzhou. As transnational migrants, the majority of blacks enjoy a high frequency of travelling between Guangzhou and Africa. Interviewee No.48, for instance, came to Guangzhou for trade ten years ago, live in *Xiaobei* for around a month each year. Moreover, 34% of the sample has lived in Guangzhou for 1-3 years, 5% for 3-5 years, yet only 2% for more than 5 years. Clearly, it indicates that the surging of transnational migrants in Guangzhou is largely a recent phenomenon, though the transnational trading of these migrants has already lasted for around two decades.

#### 4.2 Ethnic economy of Xiaobei

The goods the interviewees are trading mainly contain three types of products, i.e. textiles, cosmetics and electronic products. Most interviewees mentioned that they buy and sell clothing, shoes, cosmetics and electronic products such as mobile phones, DVD and so on, 'I sell everything' (Interview No. 11). Normally, they ship the goods bought in Guangzhou back to their own country or surrounding areas, then sale through the network of local traders. Interviewee No.3, for example, told us that he 'sell goods to the entire sub-Saharan Africa'. In fact, quite a few of the interviewees claim that their goods are sold in almost all West African countries. Interviewee No.10, however, even sells products to not only Senegal, but also Spain and Italy, the Europe.

Accordingly, the operation of the ethnic economy in *Xiaobei* can be divided into two types: namely salesmen (*Xingshang*) and tradesmen (*Zuogu*). First, the former, salesmen refer to a group of transnational Blacks come to purchase goods frequently, especially during the CECF period, and then go back to the homelands to sell. Normally, they run one or several shops at the homeland that sell middle or low quality products through importing from Guangzhou. The latter, however, refers to the group of Black traders open shops or companies to run business in Guangzhou. Based on these two groups, transnational Blacks of *Xiaobei* establish a special sociospatial network that involves local people, market, society, and governments of Guangzhou (Figure 9).

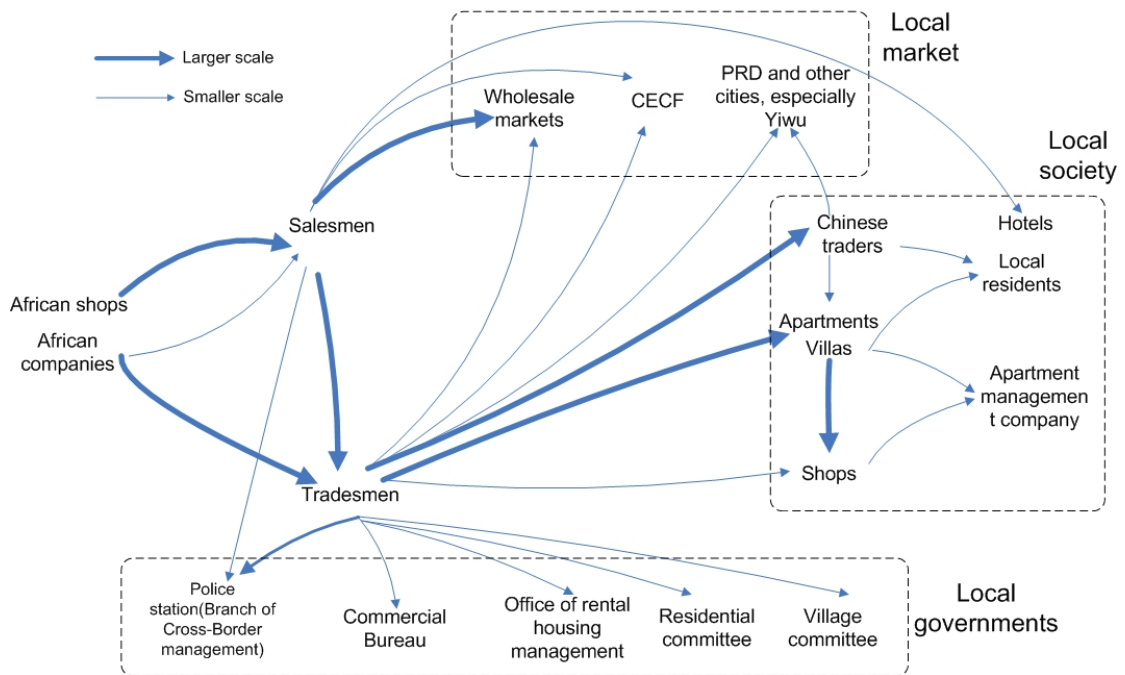


Figure 9 Xiaobei's African traders' social connections

First, salesmen come and live in *Xiaobei* for a shorter period of time, either each year or each month, to import products. Therefore, the purchase of goods is the main engagement of this type of transnational migrants. The daily works of salesmen in Guangzhou is mainly linked to the local wholesale markets. Let's take Interviewee No.20, a Tunisian trader, as an example. He started to do business in Guangzhou since 2003, and visited Guangzhou 4-5 times per year. Each time he stayed about 15 days in the city, focusing on several large-scale footwear wholesale markets. As short-term residents, they would choose to live in hotels, and it is quite common that several traders sharing one room. As for their social networks, 43% of the sample has friends or relatives in Guangzhou, insisting that friends (so-called 'brothers' by Muslims) are of high importance to business, though some of them have Chinese friends. Meanwhile, also some traders completely depend on themselves, digging deep into the wholesale markets and dealing upon personal exploration. Nevertheless, salesmen have few contacts with Chinese. Most of their expenses and trades are within or around the wholesale markets, but they rarely get in contact with local communities. According to local laws and regulations, these transborderers must register in the Immigration Department of Public Security Bureau to have a temporary residence permit. In fact, however, only a few of them will obey the regulations. In fact, some interviewees are even unable to afford the registration fee, a total of 400 RMB yuan.

*'...They don't even have 100 dollars in their pockets, and could hardly pay for bills of hotels in the first few days when arrived in Guangzhou...'* (Interviewee No. 22).

*'...Unlike those who have money for two-weeks in their pocket, we Africans start from nothing...In order to have the money for meals tomorrow, we have to work immediately when we arrived in Guangzhou...'* (Interviewee No. 25).

This therefore indicates that some of the salesmen are very poor people. For example, some of them just came and purchase some second-hand clothes to import to Africa (Survey 2007). In this sense, the African salesmen are a group of people from diversified socio-economic background. Most of them are rich, but some are extremely poor.

Second, the tradesmen refer to agents working in Guangzhou appointed by African companies, or those set up companies directly in Guangzhou. Normally, tradesmen purchase goods from various wholesale markets, shops or factories, and then ship the goods back to their countries or other places. Malians, for instance, have opened nine 'Cargo' in Guangzhou, which were set up in Bangkok before 2000. This type of Cargo normally has five to ten employees, the largest of which even holds 30 Chinese staff. Every month, they ship goods for West African traders, the larger stock of which can have 20-50 containers. A few tradesmen extend their business space to other cities of the PRD, such as Shenzhen, Dongguan and so on. Moreover, it is found that the tradesmen have a strong link with Yiwu, the Zhejiang town playing an important role as the world factory of petty products such as buttons, knit goods, toys, and so on.

Unlike salesmen, however, these Black traders often rent an apartment in *Tianxiu* Building or the neighbourhood apartments. Certain even purchased and therefore owned the housing (Interviewee No.27, No.40). Around 90% of these traders have African friends or relatives in Guangzhou, and some often hire Chinese agents and translators. Nonetheless, the links between tradesmen and salesmen is quite strong, since salesmen often purchase through tradesmen's business networks. In addition, tradesmen often have contacts with local institutions such as local police stations, the Industrial and Commercial Bureau, the Department of Rental Management, and the local residential committees. A certain number of samples, however, try to avoid the charge of either tax or resident permits. Consequently, during the survey, it is found that the Black traders generally do not enjoy a good reputation among the Chinese government officials, '...some of them are dangerous', 'they are problems...', they said.

### **4.3 Sociospatial segregation of Xiaobei**

During the survey, a number of questions are used to test the feeling of African traders towards to local society. In sum, the traders' comments upon Guangzhou and the local residents are featured by a neutral stance. For instance, the openness of the local culture and society is applauded to have provided them with development opportunities, as most of the transnational traders response positively towards to test comments such as 'The government of Guangzhou treats me friendly' (69%), 'Citizens of Guangzhou are friendly to me' (58%), and 'Guangzhou could accept people of multiple groups' (97%).

*'...I like Guangzhou. It is very free here. In Europe, people always consider Africans to be poor and asking for help, while people here do not. Respect we get here and people treat us just as businessmen, without any prejudice' (Interviewee No.27).*

Nevertheless, as for the relations with local residents, the traders often leave the comments that although they can get along with local people, there is little

interactions between them. In fact, most of the sample does not prefer to live with Chinese in the same community (Table 1).

The survey shows that the African Traders mainly consider rent housing (44%), and more than often prefer a location near to the workplaces (51%). But, 82% of the respondents do not satisfy with their current living conditions, so that 44% of the sample mentioned that they would not live in the present house for a long term. Moreover, it is found that 51% of the Africans have housing mobility of once or more times, and one sample even has changed houses for four times. This indicates a high frequency of African traders to change their homes. Nevertheless, for the shortage of the research design, it remains a question that whether these housing mobility have moved these African traders away from *Xiaobei*. If the answer is yes, it will suggest that *Xiaobei* de facto acts as a ‘bridge’ for new comers to Guangzhou; and it will be interesting to further investigate who leave and who left. If the answer is no, it will confirm that *Xiaobei* has become the magnetic enclaves for African traders. To answer this question will be an important task of studies in the future, since it is linked to the question that whether *Xiaobei*’s status as a transnational ethnic enclave will be waxed or waned.

Table 1: Evaluation of *Xiaobei*’s Blacks towards the local society

<i>Attitudes of local residents to you</i>			<i>Communication with local residents</i>		
	Sample	%		Sample	%
Very good	3	7.00%	Often	1	2.30%
Good	5	11.60%	Sometimes	7	16.30%
OK	28	65.20%	Rarely	29	67.40%
Not good	7	16.20%	Never	6	14.00%
<i>Whether you can stay with local residents harmoniously</i>			<i>Would you like to live with Chinese in the same community</i>		
	Sample	%		Sample	%
Yes	17	39.50%	Yes	13	30.20%
No	16	37.20%	No	30	69.80%
No comment	10	23.30%			

The survey of local residents, however, demonstrates that Chinese hold a negative attitude against the African traders. Among them, 82.9% are not willing to live with the Blacks in the same community. In fact, 54.3% of them argue that if the populations of Blacks in *Xiaobei* keep increasing, they would consider moving away. Local residents comment that Black people have a frightened appearance, coupled with language differences, communication hardships, and so on. Nevertheless, also there are some local residents argue that the arrival of the African traders accelerates the development of the economy of *Xiaobei*, though it also suffered a loss of Chinese businesses and households.

*‘...It makes Xiaobei nearly a pure Blacks area...’.* The manager of Tianxiu Building said, *‘...for the sake of business interests, we do not mind the Blacks to do business and live here; However, the high mobility of the Blacks, coupled with the language barriers, has created difficulties for our management...especially, some Blacks are often linked to rent evasion...’* (Manager, Tianxiu Building).

*'...The blacks are hard to manage...their hygiene condition is poor...'*  
(Manager, Yidong Building).

Therefore, the manager of *Yidong* Building believed that it is the arrival of African traders that bring about a gradual relocation of the Chinese businessmen within the building. In response, *Yidong* Building raised the rents as one of their measures to discourage the Blacks to move in. Also the manager of *Guolong* Building also does not want the number of African residents to increase. As a recent trend, local estates management organizations have taken approaches such as raising rents or compulsorily denying Blacks accessibility to curb the growth of Blacks. As such, the sociospatial segregation of *Xiaobei* is taking shape, and the development of this transnational ethnic enclave will suffer more and more intensive responses from local residents and institutions.

## **5 Discussion and Conclusions**

At the turn of the 21<sup>st</sup> century, the restructuring of the global space economy as 'space of flows' has brought about divergent patterns and processes of population mobility across the world. While the novelty of the evolving patterns and processes of population has been mastered by the prevailing theory of transnationalism, the focus of these studies are mainly targeted on transnational migrants between nations of the core and the margins. The original margins of the world such as China, however, also undertake important roles in the global economy. As the goods of 'Made in China' being sold across the global, Chinese cities began to attract massive numbers of transnational migrants. Nevertheless, relatively little is known about the mechanism of the border crossing of these margin-to-margin migrants. While previous ethnic enclave study has centred on market economies, it is unknown whether the argument can be applied to a non-market or semi-market context.

This article sought to empirically investigate the ethnic enclave arguments by considering transnational African traders in Guangzhou, the third largest metropolis of China. The basic finding is that the transnational migrants in *Xiaobei* are composed of a highly diversified group. Though they mainly come from Middle-West Africa, they hold different socio-economic background, trading different goods, sharing various religions, different culture and languages. Through these transnational migrants, shoes, clothes, cell phones, computers, MP3, and nearly all produces made in the world factories of China are sold to Africa.

Nevertheless, the rising of transnational ethnic enclave can not solely attribute to the impact of so-called 'globalisation'. For instance, why it is only Guangzhou rather than other globalising Chinese cities such as Shanghai and Beijing that Black traders accumulate? Ethnicity, transitional economy and local place-making are interrelated in complex ways, which have to be understood along the uneven development geography in terms of four scales, i.e. global, nation, region, and local. First, the new spatial division of labour across the global provides China opportunities to become the new power house of the world economy, while the nation aptly captured the chance through Deng Xiaoping's market reform and open-door policies after 1978. The door open of China, however, undertook a gradual strategy, whilst the first step of which was undertaken in the PRD, and then the east coastal regions. Accordingly, selected regions such as PRD and YRD become the most developed areas of China, to

the extent that both regions enjoy the new role as world factories. Therefore, as the headquarters of these two regions, both Guangzhou and Shanghai becomes the centre of goods exporting to the world.

Both Guangzhou and Shanghai already played the roles as the major port cities of China in history. Nevertheless, Guangzhou differs to Shanghai in that it holds a much longer history of trade through wholesale markets. In *Xiguan* of *Liwan* District, for example, wholesale markets selling specific goods such as shoes, clothes, teas, and medicines have been constructed since the Qing Dynasty. At the end of 2005, a total of 904 wholesale markets were recorded in Guangzhou, which had a yearly trade amount of 98.3 billion RMB yuan. Among them, 70% are markets of consumption products such as garments, shoes, caps, bags, and computers (Bureau 2006). In addition, as a neighbourhood of Macau and Hong Kong, the global city of Asia, Guangzhou shares a very convenient link with the outside world especially Africa.

It is not by chance that *Xiaobei* becomes a transnational ethnic enclave of Africans. Geographically, *Xiaobei* are adjacent to Guangzhou Railway Station, Guangdong Coach Station and Guangzhou Coach Station. Importantly, this enclave sits beside one of the two fair centres of the CECF, the *Liuhua* Road Fair Centre, marshalled with several huge wholesale markets, such as *Nanfang* Watch Wholesale Market, *Zhanxi* Watch Wholesale Market, and *Tianma* Cloth Wholesale Market. All of these advantages therefore contribute to the accumulation of transnational Black traders. As early as 1990, African traders began to do business in this area. Two events, the South-eastern Asia financial crisis of 1997 and China became a membership of WTO, brought it a soaring number of Black traders migrated from South-east Asia cities such as Kuala Lumpur or other places in the world.

Moreover, Guangzhou is one of the earliest cities through which Islam get transmitted into China. As early as the Tang and Song Dynasty, so-called *Fanke* (foreign Muslims) and their *Fanfang* (living and business communities) have already appeared in Guangzhou. With this long history of religious, Guangzhou has become the centre of Muslims for centuries. It is estimated that around 15,000 to 30,000 Muslims, including both Chinese and foreigners, now working in Guangzhou, among which there are nationwide translators of Arabic (Ma 2006). As shown by this study, the religious status provides Guangzhou advantage in attracting people from Muslim countries of Africa. Furthermore, Guangzhou's geographical location as well as its climates also contributes to the accumulation of transnational African traders in the city. As a south Asian city, Guangzhou provides the traders comfortable temperature and sunny weathers.

Differ to the theory of transnational migrants such as the segmented labour market in the US, the rising of transnational ethnic enclave in Guangzhou is largely attributed to the 'world factory' status of the PRD. The newly flourishing of transnational Black enclave in *Xiaobei* is a combined result of both so-called 'globalisation from below' and the unique locality such as Guangzhou's commercial culture, religion traditions and trading networks. For urban China, the rising of such transnational ethnic enclaves indicates the survival of urbanism: diversity, heterogeneous, and anonymous (Wirth 1938).

Through social networks constructed in *Xiaobei*, African traders acquired needed information as well as transportation to access wholesale markets of Guangzhou and other cities. It is shown that African traders can be categorised into two types: the salesman and the tradesman. As the majority of the transmigrants, salesmen visit Guangzhou regularly to import goods to Africa or other counties. Normally, they live in hotels around *Xiaobei*. The latter, tradesmen, also work to import goods to African, but mainly through opening shops and companies in *Xiaobei*. As such, *Xiaobei* serves as a vital, albeit unorthodox, economic institution for the welfare of transnational African traders. Nevertheless, it is found that some local residents, businessmen and property managers have begun to take measures resist the newly arrival of Blacks. They either remove from *Xiaobei*, or curb the Blacks to move in. It is possible that a segregated ethnic enclave is in the making. Globalization therefore adds a new dimension of sociospatial segregation, i.e. ethnicity, to Chinese cities. The future of *Xiaobei* deserves much scholar attentions. Further researches are needed to better understand the social networks of these transnational migrants, and its interactions with the local society, by paying more attention to some of the pivotal internal dynamics of ethnic communities within urban China's rapidly changing sociospatial landscape.

## 6. Acknowledgements

This paper is supported by a National Science Foundation of China (No. 40601033). The comments of an early draft of this paper by Prof Laurence Ma, Prof Fulong Wu, and Prof Chaolin Gu are very appreciated. Our students Huang Kai, Zhou Dailin, He Shui, He Xin, and Pan Rui help us collect parts of the data used in this study.

## 7. Reference

- Agency, H. K. C. N. 2006. *Guangzhou enhances police control upon foreigner managements*. Retrieved 04-20, 2007, from <http://www.hkcna.hk/doc/2006/2006-12-14/3809.shtml>.
- Basch, L., N. G. Schiller, et al. 1994. *Nations Unbound: Transnational Projects, Postcolonial Predicaments, and Deterritorialized Naion-States*. Langhorne, Pennsylvania, Bordon&Breach Science Publishers.
- Bureau, C. S. 2007. *China Statistical Abstract*. Beijing, China Statistics Press.
- Bureau, G. S. 2006. *Guangzhou Statistical Yearbook*. Beijing, China Statistical Press.
- Bureau, S. S. 2007. *Shanghai Statistical Yearbook*. Beijing, China Statistical Press.
- CCTV. 2005. *Koreans in China*. Retrieved 05-17, 2007, from [http://www.cctv.com/program/RediscoveringChina\\_new/20050324/102063.shtml](http://www.cctv.com/program/RediscoveringChina_new/20050324/102063.shtml).
- Cha, A. E. 2007. Chasing the Chinese Dream. Washington Post.
- Feng, J. and Y. Zhou 2003. The social spatial structure of Beijing metropolitan area and its evolution: 1982-2000. *Geographical research* **22**(4): 465-483.
- Guarnizo, L. E. and M. P. Smith 1998. The Locations of Transnationalism. *Transnationalism from Below*. M. P. Smith and L. E. Guarnizo. New Brunswick, Transaction Publishers: 3 - 34.
- Gugler, J. 2004. *World cities beyond the West: Globalization, Development, and Inequality*. Cambridge, Cambridge University Press.
- Harvey, D. 2000. *Spaces of hope*. Berkeley, University of California Press.
- Kempen, R. V. and A. S. Ozuekren 1998. Ethnic segregation in cities: New forms and explanations in a dynamic world. *Urban Studies* **35**(10): 1631-1656.

- Kim, H. 2003. Ethnic enclave economy in Urban China: the Korean immigrants in Yanbian. *Ethnic and Racial Studies* **26**(5): 802-828.
- Lin, G. C. S. and P. Tse, H. M. 2005. Flexible sojourning in the era of globalization: cross-border population mobility in the Hong Kong-Guangdong border region. *International Journal of Urban and Regional Research* **29**(4): 867-894.
- Logan, J. R., Ed. (2001). *The New Chinese city: Globalization and market reform*. Oxford, Blackwell Publishers.
- Ma, L. and F. Wu 2005. *Globalization and the Chinese City*. London and New York, Routledge Curzon.
- Ma, L. J. C. and B. Xiang 1998. Native place, migration and the emergence of peasant enclaves in Beijing. *The China Quarterly* **155**: 546-581.
- Ma, Q. 2006. *Spirit Community of Flow—Guangzhou's Muslim Research under the Antropology Perspective*. Beijing, China Social Science Press.
- Marcuse, P. and R. van Kempen 2002. *Of States and Cities: The Partitioning of Urban Space*. Oxford, Oxford University Press.
- Portes, A. 1987. The social origins of the Cuban enclave economy of Miami. *Sociological Perspectives* **30**: 340-372.
- Portes, A., Ed. (1996). *Globalization from Below: The rise of transnational communities*. Latin America in the World Economy. Westport, Greenwood Press.
- Schiller, N. G. and G. Fouron, Eds. (1998). *Transnational Lives and National Identities: The Identity Politics of Haitian Immigrants*". In: ( ) volume 6. Transnationalism From Below: Special Issue of Comparative Urban and Community Research. New Brunswick, NJ: Transaction.
- Schwartz, H. M. 2000. *States versus Markets: The emergence of a global economy*. New York, St. Martin.
- Shen, J. F., K. Y. Wong, et al. 2002. State-sponsored and spontaneous urbanization in the Pearl River Delta of south China, 1980-1998. *Urban Geography* **23**(7): 674-694.
- Shen, L. 2006. *Atmosphere of internationalisation intensified, foreigners move to Pudong*. Retrieved 05-10, 2007, from <http://sh.eastday.com/eastday/node545/node6600/userobject1ai83532.html>.
- Smith, P. 2001. *Transnational Urbanism*. Malden, Blackwell.
- Song, F. and M. Timberlake 1996. Chinese urbanization, state policy, and the world economy. *Journal of Urban Affairs* **18**(3): 285-307.
- Waldinger, R. and D. Fitzgerald 2004. Transnationalism in Question. *American Journal of Sociology* **109**(5): 1177-95.
- Wen, H., F. Ning, et al. 2005. The study of the international community demand and its planning principles. *Modern Urban Studies* **5**: 17-21.
- Wilson, K. L. and A. Portes 1980. Immigrant Enclaves : An Analysis of the Labor Market Experience of Cuban in Miami *American Journal of Sociology* **86**: 305-19.
- Wirth, L. 1938. Urbanism as a way of life. *American Journal of sociology* **40**: 1-24.
- Wu, F. 2004. The Chinese city in transition: towards theorizing China's urban restructuring. *Globalization and Chinese cities*. L. J. C. Ma.
- Wu, F. 2007. *China's Emerging Cities: The Making of New Urbanism* London, Routledge.
- Wu, F. and K. Webber 2004. The rise of 'foreign gated communities' in Beijing: Between economic globalization and local institutions. *Cities* **21**(3): 203-213.



- Wu, F., J. Xu, et al. 2006. *Urban Development in Post-Reform China: State, Market, Space*. London, Routledge.
- Zhang, L., S. X. B. Zhao, et al. 2003. Self-help in housing and Chengzhongcun in China's urbanization. *International Journal of Urban and Regional Research* **27**(4): 912-937.
- Zhou, M. and J. Logan 1991. In and out of Chinatown: Residential mobility and segregation of New York's Chinese. *Social Forces* **70**(2): 387-407.
- Zhou, Y. X. and L. J. C. Ma 2003. China's urbanization levels: Reconstructing a baseline from the fifth population census. *China Quarterly*(173): 176-196.

## **Community Interactions and Social Harmony: Implications for Urban Development and Town Planning**

**Ziqi LIAO**

*Department of Finance and Decision Sciences, Hong Kong Baptist University,  
Kowloon, Hong Kong*

Tel: + 852 34115227

E-mail: victor@hkbu.edu.hk

### **Abstract**

This paper discusses the development of community facilities and the promotion of social interactions in Singapore. It also explores the implications of the practices and experiences of Singapore for urban development and town planning in China. As a matter of fact, it is considerably challenging to promote community interactions and identities especially in newly developed residential estates of Singapore. This is further complicated by the multiple racial society of the country. Therefore, it is necessary to encourage the residents of different races, languages, religions and cultural backgrounds to live in a harmony manner. Community centers, citizen consultative committees, residents committees and family service centers have been developed to promote a sense of belonging of the community and facilitate the achievement of social harmony.

The community centers have been developed to provide meeting grounds for various ethnic, language and religious groups. The residents of different races, languages, incomes and age groups are encouraged to participate in a wide range of activities at the community centers. The participations of the residents effectively promote unity within the diversity of races, cultures and religions. At present, there is a community centre and a club management committee in every constituency. It organizes cultural, educational, recreational, sports, social and other activities for mass participations to promote racial harmony and social cohesion. It also acts as a communication channel between the residents and the government. In addition, there is a citizen consultative committee in each constituency to supplement the operations of the community center. As the population becomes wealthier, people would like to have some kind of participations in the decision-making processes, because the decisions affect their lives, particularly with regard to housing environment. The citizen consultative committee aims at providing the residents with a cleaner, safer and attractive living environment. It looks after the interests of the residents at a constituency level. It also plans and coordinates community activities and disseminates the information to the people and channels feedback to the relevant authorities. Moreover, the residents committees have been organized in different public housing estates to promote neighborliness and racial harmony among residents through a wide range of activities. These include parties, tuition classes, educational tours, dialogue sessions and family days. Lastly, the family service centers are one stop community-based social service organizations that provide integrated remedial and preventive services and help individuals appreciate family responsibilities. The family service centers also provide counseling, information referral services, family life, education programs, volunteer programs and support programs depending on the needs of the community.

The practices and experiences of Singapore have practically useful implications for urban development and town planning in China. It is strategically important to develop community facilities to support social interactions in different residential estates. In particular, new town planning should aim to construct favorable environments that can effectively facilitate social interactions and community development. At the same time, community-based organizations should be developed in order to strengthen neighborly ties and promote social harmony.

## **Living with Gates: Functions, Effects and Psychology of Walls and Gates in Chinese Commodity Housing Estates**

**Werner BREITUNG, Michael ARRI**

*School of Geography & Planning, Sun Yatsen University, Guangzhou 510275, China*

### **Abstract**

When analysing the forms and organisation of modern commodity housing estates in China several scholars have recently made references to the much-discussed issue of so-called "gated communities". There is an extensive body of publications on this issue based on western (mainly North-American) and third-world experiences. Since these findings may not necessarily be applicable to Chinese cases, the authors of this paper investigate empirically the cultural and practical meaning of gates and walls for the new middle-class estates in the Pearl River Delta - especially Guangzhou. They reflect on segregation, activity spaces and the impact on contacts, communication and the flow of people and ideas. When discussing the psychological reasons and functions of walls and gates in modern Chinese commodity housing, they refer to a long tradition of these patterns in urban China and to the changing needs of a society in transition.

# Neighborhood Development and Sense of Community in the Transition of Urban Guangzhou

Yingqing OU<sup>1</sup>, Beisi JIA<sup>2</sup>, Stephen S. Y. LAU<sup>3</sup>, Minzhi LIN<sup>4</sup>

<sup>1</sup>Department of Architecture, The University of Hong Kong,  
Tel: +856 61017267  
Email: yingqing@hkusua.hku.hk

<sup>2</sup> Department of Architecture, The University of Hong Kong,

<sup>3</sup>Department of Architecture, The University of Hong Kong,

<sup>4</sup>Department of Architecture, South China University of Technology

## **Abstract**

Contemporary Chinese urban development has changed dramatically since the economic reform. Work unit neighborhoods, in which neighborhoods are tightly linked with their working places has been rapidly transformed to commodity neighborhood developments. However, few studies have examined the social change and sense of community at the level of urban neighborhood. This paper seeks to fill some of this gap in knowledge. It draws survey of different neighborhood type (work unit neighborhood and commodity neighborhood) in Guangzhou. The paper explores the residents' pedestrian behavior, social interaction, place identity and neighborhood attachment in these neighborhoods. The result shows that housing reform in china has considerable influence on sense of community.

## **1. Introduction**

China land use patterns are rapidly transformed by marketization of land resource and commercial development of urban housing. The former work unit neighborhoods, in which neighborhoods are tightly linked with their working places, are breaking apart by commodity neighborhood developments, in which relationships in neighborhoods and working places are broken, and new interaction and new sense of belongings may formed. And the rapid urbanization process has caused traffic congestion and social isolation.

Before marketization, Chinese work units play an important role in housing production, distribution, maintenance and management (Wang, 1995). Each work unit built its own housing, amenities, infrastructure and other social facilities within the land boundary for its workers as these “consumption items” were barely provided by the city government. This helped form one of most important features of the pre-reform urban structure – the mixed use of industrial and social areas within limited land compounds.

In China, The work-units are the agencies of the administration and the production of goods. Usually work-units control huge areas of land containing buildings for work and housing as well as all kinds of facilities for daily life. In the socialist system, they are centers for collective consumption where resources are re-distributed. They are

responsible for housing construction, maintenance and the provision of housing subsidies to all public employees (Shaw, 1997). They also provide their workers with schools, hospitals, sports and leisure facilities and ensure the provision of social security for each person. Each work-units complex is typically surrounded by a brick wall with a guarded gate as an entrance. The reasons for this system involved three components: socialist ideology, welfare philosophy and clan tradition. The work-units have to be really seen as communities sharing a common character, and they are in many respects completely autonomous (Schwarzenbach, 1994).

The Decision on Deepening the Urban Housing Reform was published in 1994. The new strategy included: changing the housing investment, management and distribution systems into a dual housing provision system with a social housing supply and a commercial housing supply; housing insurance, finance and loan systems; and a healthy, standardized and regulated market system.

The housing reform will create new social divisions and newly divided cities. The changes and the urban renewal programmes which have moved people from central districts to peripheral areas. However, the social mix of the older central city neighborhoods has been lost and their access to the facilities and services of the centre of the city has been reduced. At the same time a different social class from the tradition occupied the limited new housing in the central city. The suburban neighborhoods will require new employment opportunities which are not always available. In this sense, the new land-use pattern emerging in Chinese cities, and particularly the core-periphery differences, will be more similar to the pattern in western cities.

The reform will eventually involve changing the structure of communities and cities from work-based to residential-based. There are three distinctive land-use zones in large Chinese cities. The central area is the old self-sufficient economy and has undergone new changes. The intermediate is work-unit ring of the socialist planned economy. The outer ring of housing and related facilities is the direct product of the new market economy. In both economic and land use terms, there is pressure from the inside and outside on the intermediate ring, particularly the old industrial factory areas because of their important location.

Commodity neighborhood development may lead to the local neighborhood independent from the work places. However, while the social contact in neighborhood has received significant attention from the researchers in the West, little is known about how neighborhood type transformation influences residents' interaction in China.

## **2. Literature review**

Sense of community and social contacts provide a wide range of benefits to both individuals and communities in all cultures. Individuals with strong social connections have higher social support including functional, informational and emotional support, less fear of crime, better mental health and higher level of psychological well-being (Teachman et al., 1997).

Lots of literature has pointed out that the human settlement should maximize the chances of sense of community in terms of social interaction, pedestrian behavior,

place identity and neighborhood attachment. A common understanding in sustainable urban development is to promote high dense, mixed-use and walkable living districts to minimize energy consumption and pollution, enhance social interaction and create a livable environment (Duany and Plater-Zyberk, 1992).

Neighborhood, as a convenient scale of urban development with a group of residence, is vitally important in urban planning because it not only occupies the largest portion of urban space of a city, but also has great effect on social life and urban environment. Neighborhoods, as the smallest integrated unit in urban area, play an important role in urban sustainability. In China, the work unit neighborhoods and commodity neighborhoods are two main types of neighborhood. The advantages and disadvantages should be evaluated from sustainability perspective.

The definition of sense of community has varied across the studies. Taken (1999) called for clarification of this concept as it pertains to physical design. McMillan and Chavis (1986)'s measure is frequently cited in this area. They argue that the feeling of belonging, mutual influence, fulfillment of needs, and shared emotional connection are the four major elements that should be distinguished in sense of community. However, this measurement is not designed to focus on physical aspects of community (Kim et al., 2004). They argue that community or place attachment, community identity, social interaction, and pedestrianism are four domains of sense of community. Their concept emphasized on the influence of physical neighborhood environment.

Community attachment in neighborhood is defined as residents' emotional bonding or ties to their community. Community identity refers to personal and public identifications with a specific bounded community with its own character. Social interaction is defined as social opportunity in which two or more residents attend to the quality of their relationships. Pedestrianism implies that a community is designed for walking and fostering streetside activities (Kim et al., 2004).

This study offers empirical data to examine the compactness and difference of sense of community between work unit and commodity neighborhood, and to explore the effects of neighborhood type as well as residents' perceptions on neighborhood environment on sense of community.

### **3. Preliminary findings**

Four neighborhoods were selected as cases studies, with two represent prominently work unit housing: Neighborhood of South China University of Technology (SCUT), and Pearl River Water Resources Commission (PRWRC), and the other two is commodity neighborhood: Wuyangxincheng and Tianhenan. The cases are located in the fringe of the inner city (Figure 1). The study focused on different but typical residential types rather than those at the extremes ends of the social spectrum such as poor areas closely associated with the substantial floating population or enclaves of the most expensive luxury housing.

To explore the relationship between density land use, and the social interaction, sense of community on the other, a questionnaire survey and a site survey have to be conducted in each of the cases. The fieldwork was carried out in 2006. A total of 331 interviews were achieved with adult members of households.

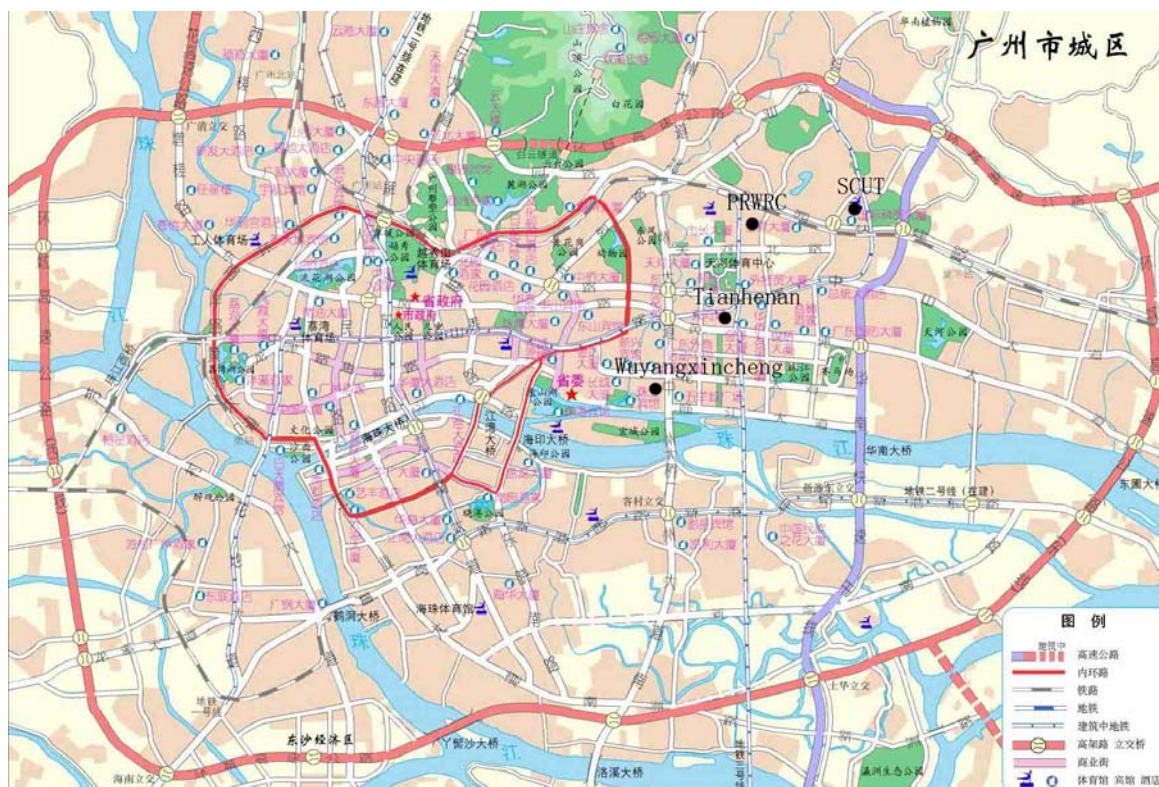


Figure 1 Background information of studied neighborhoods

The construction eras of these four cases were similar. They were constructed in 1980s. From the table 1, the overall densities of the studied neighborhoods don't have much difference. Tianhenan has highest population density 1129 person per ha, and the PRWRC has the lowest population density 883 person per ha. The floor area ratio is changing from highest 2.56 in Wuyangxincheng to lowest 2.1 in PRWRC. And the building coverage ratio is ranging from highest 33% in SCUT to lowest 2.1 in PRWRC.

Table 1 Overall densities of studied neighborhoods

	SCUT	PRWRC	Wuyangxincheng	Tianhenan
Gross Population Density	900 person/ha	883 person/ha	955 person/ha	1129 person/ha
Floor Area Ratio	2.31	2.1	2.56	2.2
Building Coverage Ratio	33%	25%	32%	30%

#### Residents' perception on neighborhood environment

Table 2 shows the general socio-economic profile of the four cases. There are difference in age and income profile between the work unit neighborhood and commodity neighborhood. Residents in the latter were younger, had higher incomes. This profile is unsurprising giving the evidence about the affordability and the nature of purchasers in the commercial housing.



Table 2 Social demographic characteristics of surveyed residents

	SCUT	PRWRC	Wuyangxincheng	Tianhenan
Age				
10-24	16.8%	8%	16.5%	26%
25-34	16.8%	21.6%	27.4%	36.2%
35-44	25.7%	13.5%	28.6%	20.3%
45-64	29.7%	43.2%	19.5%	14.5%
65-	10.9%	13.5%	7.9%	2%
Total	119	74	68	70
Family Income				
<2000	0	17.1%	10%	0%
2000-5999	61.4%	54.3%	56%	37.7%
6000-9999	23.9%	17.1%	28%	40.6%
10000-14999	12.5%	5.7%	4%	17.4%
15000-19999	0	5.7%	2%	4.3%
>20000	0	0	0	0

When asked the perceptions about the feature of their neighborhood, generally, the residents in commodity neighborhood have better perceptions on the neighborhood environment and the store environment (Table 3). From Table 3, compared with work unit neighborhood, the environment of commodity neighborhood was better in the following aspect: facilities in the open space, greenery in open space, size of the open space, convenient, variety and good commodity in local store. Finally, the residents feel more crowded and mixed land use in their neighborhood. However, the work unit has better comments on the social environment aspect: safety in open space and on the road.

Generally, perceptions on neighborhood environment in work unit neighborhood are lower than commodity neighborhood. However, the general perceptions on neighborhood environment in PRWRC and Wuyangxincheng are similar. Moreover, the mean length of the residence is also similar. Thus, in the following sections, this study emphasized the difference between PRWRC and Wuyangxincheng as represents of work unit and commodity neighborhood based on similar neighborhood environment perception. And also within the same type neighborhood, the difference of sense of community can be compared according the different perceptions on neighborhood environment.

Table 3 Perceptions on neighborhood environment

	SCUT	PRWRC	Wuyangxincheng	Tianhenan
Neighborhood	3.44	3.67	3.64	3.84
Open space	3.32	3.35	3.20	3.71
Store	3.16	3.08	3.59	3.2
Road	3.30	3.32	3.22	3.4
OS	3.56	3.73	3.78	3.74
Convenience				
OS Safety	3.46	3.73	3.45	3.48
OS Facility	3.33	3.03	3.38	3.55
OS seat	3.57	3.84	3.51	3.67
OS Visual	3.36	3.53	3.24	3.64

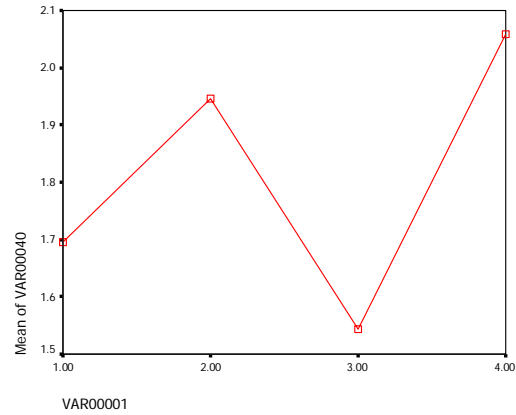
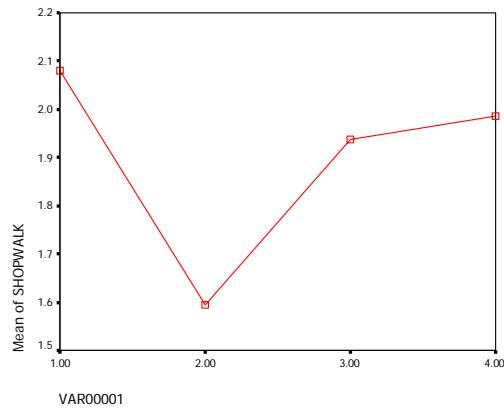
OS Green	3.07	3.49	3.11	3.61
OS Size	3.32	3.49	3.06	3.26
S convenience	3.13	3.56	3.49	3.57
S Safety	3.17	3.11	3.15	3.45
S Variety	2.90	2.64	3	3.45
S Goods	3.10	2.97	3.43	3.14
R convenience	3.45	3.49	3.49	3.72
R Safety	3.34	3.73	3.29	3.52
R Trees	3.59	3.59	3.13	3.72
R Facilities	3.36	3.27	3.28	3.40
R Housing	3.22	2.92	3.04	3.75
R Traffic	3.21	3.47	2.91	3.45
Crowding	3.24	3.40	3.03	3.45
Mixed-uses	3.09	3.08	3.23	3.51

#### Analysis at neighborhood level

As Table 4 shows, compared PRWRC and Wuyangxincheng which represent work unit and commodity neighborhood, based on similar perceptions on neighborhood environment, the differences were obvious. Generally, shopping trips were lower in work unit than commodity neighborhood. It showed the more and better stores in commodity neighborhood would attract more shopping walks within the neighborhood. On the other hand, strolling trip in PRWRC is higher than Wuyangxincheng. The larger public spaces including work places shared by the residents might contribute to the difference. However, in SCUT, the work place is separated from the residential area by a road. This might be a reason which reduced the strolling walk in SCUT. Also, the perceptions on environment are much better in Tianhenan, thus the strolling pedestrian was higher than Wuyangxincheng.

Table 4 ANCOVA results for mean walk trip frequencies

	Shopping Walk		Strolling Walk	
Between subjects	Mean	Std. Error	Mean	Std. Error
SCUT	2.0800	.12283	1.6957	.10453
PRWRC	1.5946	.15236	1.9459	.19738
Wuyangxincheng	1.9375	.12963	1.5439	.11759
Tianhenan	1.9853	.11943	2.0588	.10659
Total	1.9554	.06657	1.7953	.06229
	Between Groups	Within Groups	Between Groups	Within Groups
df	3	265	3	250
Mean Square	2.150	1.181	3.360	.957
F	1.820		3.510	
Sig.	.144		.016	



When asking why not walk for shopping, generally, the distance of local store and the price and quality of goods are two main concerns for residents not to use local store (Table 5). In PRWRC, most residents thought the price and quality of goods are not good. But in Wuyangxincheng, residents choose the stores is far away as the reason for shopping outside.

Table 5 Percent of respondents who walk to shopping for the following reasons

	SCUT	PRWRC	Wuyang	Tianhenan
<b>Reasons why I walk to shopping</b>				
1 The stores are within short distances	51.9%	56.1%	58.5%	33.3%
2 The facilities are various	8.5%	4.9%	7.7%	10.6%
3 The environment is pedestrian friendly	31.1%	21.9%	29.2%	37.9%
4 It is not convenient for driving	8.5%	17%	4.6%	18.2%
N	106	41	65	66
<b>Why not choose walking for shopping</b>				
1 The prices and qualities of goods are bad	22.2%	66.7%	0	36.8%
2 The stores is far away	38.9%	11.1%	53.3%	31.6%
3 The environment is not suitable for walk	38.9%	22.2%	46.7%	31.6%
N	18	9	15	19

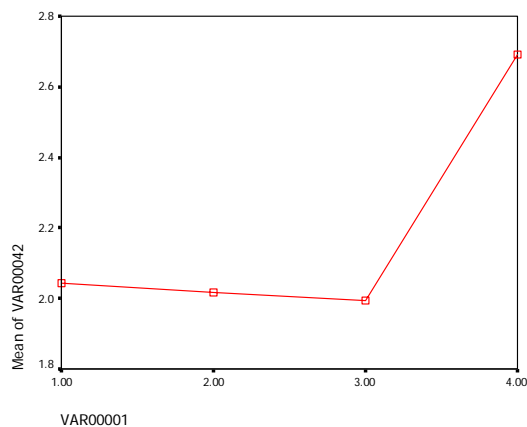
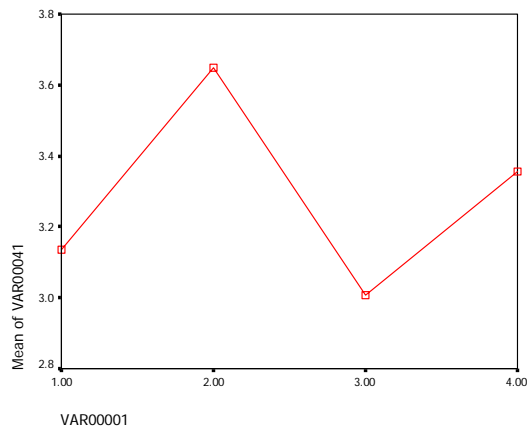
Percent of total responses

As Table 6 shows, compared PRWRC and Wuyangxincheng which represent work unit and commodity neighborhood, generally, supportive acts of neighboring were higher in work unit than commodity neighborhood. But social ties showed no much difference between PRWRC and Wuyangxincheng.

Table 6 ANCOVA results for mean values of neighboring behaviors

	Supportive acts of neigh.		Social ties	
Between subjects	Mean	Std. Error	Mean	Std. Error
SCUT	3.1345	.08900	2.0448	.13934
PRWRC	3.6486	.11233	2.0180	.22183

Wuyangxincheng	3.0074	.11086	1.9951	.14474
Tianhenan	3.3571	.07874	2.6905	.14850
Total	3.2228	.05122	2.1837	.08091
	Between Groups	Within Groups	Between Groups	Within Groups
df	3	290	3	290
Mean Square	4.019	.738	7.902	1.863
F	5.448		4.243	
Sig.	.001		.006	



Further analysis the social interactions from Table 7, we can see that more residents of work unit neighborhood usually meet their neighbors at home (14.1% and 20% especially) compared with residents in commodity neighborhood (4.7% and 0). That means that the social ties in work unit neighborhood might be more intimate than in commodity neighborhood. On the hand, more residents meet their neighbors at Neighborhood Park in commodity neighborhood. The better open space environment did attract residents to use it thus has more social interaction.

Table 7 Places where social interactions with neighbors normally begin

Interactions with neighbors normally begin	SCUT	PRWRC	Wuyang-xincheng	Tianhenan
At home	14.1%	20%	4.7%	0
At community center	8.2%	0	11.9%	6%
At neighborhood park	15.3%	20%	16.7%	43.8%

At local store	12.9%	10%	11.9%	12.5%
On street or sidewalk	23.5%	30%	21.4%	31.2%
Around neighborhood	10.6%	10%	14.3%	6.3%
N	85	20	42	32

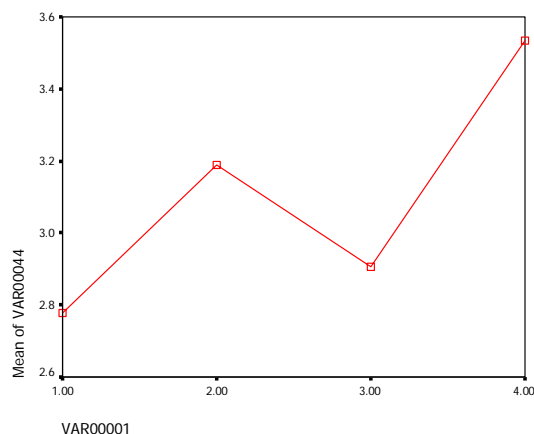
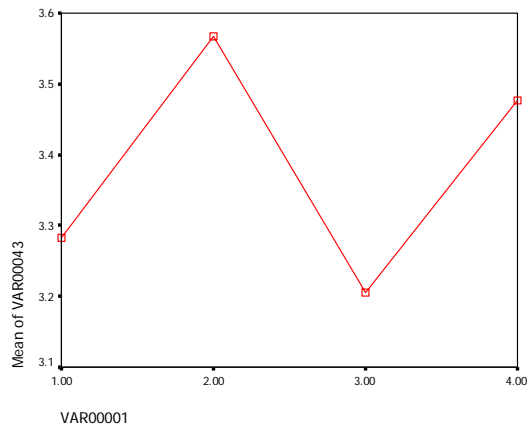
#### Percent of total responses

Lots of residents in work unit neighborhood (40.9%) report that they know their neighbors by work together. But in commodity neighborhood, most of residents indicate that they know their neighbors by doing outdoor activities. This shows that social interaction has changed from “work-based” type in work unit neighborhood to “place-based” type. It conforms to the concern that neighboring have declined and given way to weaker forms of social interaction during the changing from work unit neighborhood to commodity neighborhood.

Compare PRWRC and Wuyangxincheng, the neighborhood attachment and place identity were lower in Wuyangxincheng (Table 8). That means if the perceptions on the neighborhood environment are similar, people in work unit neighborhood would have a relatively stronger neighborhood attachment and place identity. The housing reform process and commodification is beginning to create areas of more market oriented housing valued for their amenities and higher quality but perhaps lacking the distinctive character of that area. Also, people work and live in the same place means the high degree of neighborhood use which makes them more familiar with the population and place.

Table 8 ANCOVA results for mean values for psychological sense of community

	Neighborhood attachment		Place identity	
Between subjects	Mean	Std. Error	Mean	Std. Error
SCUT	3.2829	.09181	2.7773	.08965
PRWRC	3.5676	.11176	3.1892	.11314
Wuyangxincheng	3.2059	.10615	2.9044	.09208
Tianhenan	3.4762	.07661	3.5357	.07585
Total	3.3469	.05048	3.0391	.05097
	Between Groups	Within Groups	Between Groups	Within Groups
df	3	290	3	290
Mean Square	1.604	.740	9.162	.677
F	2.166		13.535	
Sig.	.092		.000	



When asking why they choose to live in the current neighborhood, a large proportion of residents in work unit neighborhood thought the quality of school is good and the houses were provided by work unit as the main reasons for choosing the houses. On the other hand, the reasons for living in commodity neighborhood are various. In Wuyangxincheng, most people choose the neighborhood because of the good quality of the school and close distance to work place. In Tianhenan, people consider the convenience for living and the physical environment as main reason for living there. It showed that residential location involved a limited element of choice in work unit neighborhood than commodity neighborhood.

#### 4. Conclusion

This paper has aimed to provide some new empirical material on the role and experience of the neighbourhood in a Chinese city which has experienced significant social, economic and physical transformations in recent decades. It also aimed to examine the impacts of neighbourhood environment on sense of community.

In sum, by examining these cases, we might draw the following conclusions:

1 Density is not so different between these cases.

2 Mixed land use pattern is different between the work-unit neighborhood and commodity neighborhood. The work place and residential place are closely placed in work unit neighborhood. And the commodified neighborhood had the apartments overlooking communal gardens, meeting rooms and recreational facilities.

3 Residents' evaluation on neighborhood environment is generally lower in work unit neighborhood than in commodified neighborhood.

4 The level of social interaction, place identity and neighborhood attachment tend to be lower in commodity area than work unit neighborhood provided the similar perceptions of neighborhood environment.

Commodity neighborhood tends to decrease sense of community when perception of neighborhood environment is similar. This might imply that weaker sense of commodity will become more prevalent as Chinese cities become more commodified. The links between neighbors and work associates faces considerable transformation as these local networks are disrupted with greater residential and social mobility. In the past, the work place is closely linked with the residential area. This would suggest that the degree of neighborhood use is high in the sense that a wide range of roles and activities are undertaken within the geographical confines of the neighborhood. With the changes it seems inevitable that the geographies of group activities will become more diffuse and that social interaction within neighborhoods will become more specialized and less intense.

It might also imply that housing construction and distribution system would exert considerable influence on residents' sense of community in contemporary china. As the work unit system loses its pivotal role in social cohesion, the improvement of neighborhood environment may enhance the role of place-based neighborhood. These activities may provide a new source of local social bonding in the residential setting.

## **5. References**

- Duancy, A. and Plater-Zyberk, E. (1992). The second coming of the American small town. *Wilson Quarterly*, 16, 3-51.
- McMillan, D. W. and Chavis, D. M. (1986). Sense of community: A definition and theory. *Journal of Community Psychology*, 14, 6-23.
- Talen, E. (2000). Measuring the public realm: A preliminary assessment of the link between public space and sense of community. *Journal of Architectural and Planning Research*, V17 (4), 344-360.
- Teachman, J. D., Paasch, K. and Carver, K. (1997). Social capital and the generation of human capital. *Social Forces*, 75(4), 1343-1359.
- Wang, Y. P. & Murie, A. (2000). Social and spatial implications of housing reform in China. *International Journal of Urban and Regional Research*, 24 (2), 397-417.

## Emerging Developmental Issues in Hong Kong and Shenzhen



## **Cross-boundary Urban Development in Hong Kong and Shenzhen 1997-2007**

**Jianfa SHEN**

*Department of Geography and Resource Management, The Chinese University of  
Hong Kong, Shatin, NT, Hong Kong*

### **Abstract**

Hong Kong has been an important city in Asia for a long time. It grows in strength by firstly becoming an industrial city in 1950s-1980s and then a world class service centre since the late 1980s. Shenzhen started from a tiny town in the early 1980s and now is a leading city in mainland China with a population even larger than Hong Kong. Shenzhen's urban growth has benefited from enormous inflow of capital and human resources from Hong Kong. With economic transformation in Hong Kong and the growing strength of Shenzhen city after 1997, the relation between Hong Kong and Shenzhen has undergone dramatic changes with significant implications on cross-boundary economic and urban development in both cities.

While Hong Kong and Shenzhen compete in some areas, inter-city cooperation has become an important strategy for the governments of both cities. Much progress has been made in cross-boundary cooperation but it still falls short of public expectation. Such uneasiness is related to the special context of different capitalist and transitional socialist economies in two cities respectively under the framework of "one country-two systems". The paper will review the trends of cross-boundary urban development between Hong Kong and Shenzhen in 1997-2007. The paper will assess the current status of intercity competition and cooperation, and explore rooms for further cooperation.

## Cross-Border Residential Mobility

Eddie Chi Man HUI<sup>1</sup>, Francis Kwan Wah WONG<sup>1</sup>, Si-ming LI<sup>2</sup>, Ka Hung YU<sup>1</sup>

*1. Department of Building and Real Estate, The Hong Kong Polytechnic University*

*2. Department of Geography, Hong Kong Baptist University, Kowloon*

### **Abstract**

This paper aims to investigate how various household/economic attributes shape one's preference for future cross-border residence, in along with their location and tenure preferences, grounded on utility analysis. What makes cross-border residence between Hong Kong and Mainland China different from conventional residential mobility is that it is almost a mixture of intra-urban mobility and migration between cities. We use logistic regression models to examine the willingness of elderly citizens to move and become homeowners in the Mainland. The findings suggest that lower income individuals were in general reluctant to move. In addition, an individual's duration of stay in the Mainland has impacts not only on likelihood of moving to live cross-border, but also on their tenure choice preferences. The positive response of elderly citizens (and public housing renters in a sense) brings forth some policy implications with regard to availability of social security, social service and even potential abuse of public rental housing, which needs to be addressed by the government.

**Keywords:** cross-border residence, location preferences, utility analysis, logistic regressions

# **A Transitional City of China: The Case Study of Shenzhen, China, 1980-2005**

**Liou XIE, Victor F. S. SIT**

Department of Geography, The University of Hong Kong,  
Pokfulam, Hong Kong  
Email: xieliou@hku.hk

## **Abstract**

This paper is based on the findings of my study for an MPhil degree at the University of Hong Kong, 2007. Cities in post-reform China and post-socialist countries in Eastern Europe (EE) are experiencing tremendously changes. China's post-reform development, as characterized by gradual opening of its market to the world, has been driven by both internal dynamics and external global forces. The urban economy of Chinese transitional cities has under specific circumstances. In turn, the physical pattern of the city has also been changed as a result of these transitional drivers. Five key transitional dynamics and their impacts on Shenzhen's transitional development have been analyzed, i.e. (i) the institutional and policy innovations, (ii) the land reforms, (iii) the policies and changes in housing, (iv) the foreign related policies, especially the FDI, and, (v) the changes of population policy. Meanwhile, more and more stakeholders have participated in the development of the city. In terms of spatial restructuring, land and housing reforms have accelerated land conversion, leading to a process of suburbanization and the decentralization of activities. The whole municipality has grown into a polycentric structure, the old commercial center in Luohu and the emerging new Central Business District (CBD) forming the dual-center of the city. On the other hand, comparing Shenzhen as a transitional city of China with the typical Chinese socialist city, the transitional cities in EE and the western capitalist city, we argue that the Transitional City, using Shenzhen as an example, is a new type of city.

## **1. Introduction**

The term Transitional City refers to cities in countries that were formally socialist, but that have abolished state socialism or launched reforms to loosen one party control and have started to rely more on market forces. These countries are "Transitional Economies". They have generated heated discussion and have been studied extensively in the last two decades (Sit, 1985, 1995; Walder, 1995; Gaubatz, 1995, 1999; Harloe, 1996; Szelenyi, 1996; Lin, 2002; Wu, 2003; Saich, 2004). This study intends to contribute to the body of knowledge of the cities in such transitional economies by examining a specific city of China, i.e. Shenzhen in Guangdong Province that borders on Hong Kong.

Instead of the "Big Bang" approach that prevailed in the Eastern European (EE) countries, China followed a strategy of 'Gradualism' in its transitional development by opening its market and implementing reforming policies step by step since the initiation of 'Open and Reform' policies in 1978. The highly centralized power characteristic of the socialist era has given way to decentralization, granting local

governments more decision-making power. Land reforms changed land-use rights from termless administrative allocation to paid use, and land transactions have also been allowed. Housing reforms have broken the physical relationship between employees and their work-units, giving the former more freedom in choosing where to live. Both these land and housing reforms have accelerated land conversion, and in turn, have changed the physical layout of the city. A large number of surplus rural labor has been released from land cultivation as a result of the agricultural responsibility system. Some have engaged in new non-farm jobs in the Town and Village Enterprises (TVEs) that boomed in the 1980s and 1990s; while others have been attracted by opportunities in cities in transition, causing large scale rural-urban migration. These are the major internal forces that have been shaping China's development and urban growth in the transitional era.

At the same time, the opening of China's large market to the world is one of the most important measures as well as a necessity in the transition. External global forces have been introduced to and have become embedded in the local political, economic and social system of transitional China. Large amounts of foreign direct investment (FDI) have entered China and have stimulated its economic growth and have in turn inspired significant social transformations.

This study summarizes the transitional dynamics that have shaped Shenzhen's development since 1980 and the institutional, economic and spatial characteristics of the Chinese transitional city. Its position in China's urban system, its special location as a neighbor to Hong Kong and special status in being the test subject for most reform policies have made it the pioneer of China's transitional development and a special case study for China's transitional cities.

## **2. Transitional Dynamics of Shenzhen**

As a pioneer in China's post-reform development, Shenzhen has experienced intense and rapid transformations in its institutions and policies in its transition and has demonstrated specific features as a result of these changes. Five key transitional drivers and their impacts on Shenzhen's transitional development were identified for analysis, i.e. (i) institutional and policy innovations, (ii) land reforms, (iii) policies and changes in housing, (iv) policies related to foreign investment, especially FDI, and (v) changes in population policy. The research questions have been raised with regard to the key drivers of change and their impacts on Shenzhen's transitional development, the growth and changes of its urban economy and spatial patterns, as well as the characteristics of Shenzhen's urban structure.

### **2.1 Institutional and Policy Innovations**

When the Shenzhen Special Economic Zone (SEZ) was established in 1980, its administrative system was just a copy of the highly centralized and unified management model of the socialist administrative system of China since the 1950s. During the past 25 years, seven major rounds of organizational reforms within the city government were initiated and completed in order to catch up with the new demand of Shenzhen's high-speed development and to deal with the increasing play of market mechanisms and economic globalization. These seven rounds of reform were proposed and implemented in 1981-1982, 1983-1985, 1986-1987, 1988, 1991-1993, 2001 and 2003-2004 respectively.

First of all, the key direction of government and institutional reforms was to allow economic development to be regulated predominantly by market mechanisms, under basic and necessary guidance of the government.

Secondly, the first six rounds of government reform have focused on streamlining government organization and staff size in order to improve efficiency. The seventh round of reform in 2004 was aimed at strengthening public administration and services.

Thirdly, the intention of dividing the roles of decision-making, execution and supervision was the focus of the latest round of reform. However, its implementation of this reform was slow in progress.

The municipal government has thus been playing a dynamic role in the growth of Shenzhen and in its urban management through organizational restructuring. The devolution of central power has turned the role of central government from one of giving direct orders, as in the socialist era, to one of regulatory control in the transitional era. At the same time, a great deal of effort has been done by the municipal government to improve administrative efficiency, to adapt to the demand of the fast and foreign-oriented development and to transform from an administrative government to a service government.

## **2.2 Policies and Changes of the Land Market**

Policies related to land initiated and implemented in the last 25 years are of key importance to the socio-spatial development of the transitional city. Three major events have marked the course of land reforms in Shenzhen. The old allocation system of land which was without use conditions and decided by the government was abandoned. Various channels for obtaining land use right have been set up.

The first and most important reform was in 1987-1988. The first paid use of land was released on Dec. 1 1987. And in January 1988, the *Regulations of the Shenzhen Special Economic Zone on Land Management* was promulgated. The system of compensatory and conditional usage of land was legally established in Shenzhen.

The second change was brought by the promulgation of the *Provisions on Land Trading Market of Shenzhen* in 2001. After that, a tangible land market is established and all transactions in land use right must take place publicly in the land market. The office managing the tangible land market is the Shenzhen Land and Housing Trading Center.

The third change was in 2005 when the first case of industrial land was leased successfully on the land market. This indicated that the range of land resources regulated by market mechanisms in Shenzhen had expanded to include industrial land.

The new land system retains the public ownership of the land, but allows its use rights to be leased or transferred. Land use right can be obtained from the state by four means, i.e.: i) mutual agreement; ii) invited competitive bidding; iii) public auction; and iv) listing (starting from 2004). Tangible land market has been established. The supply and demand of land is to be largely regulated by the market mechanisms with

some intervention of government. The allocation of land use right has grown rapidly since the first reform (see figure 1).

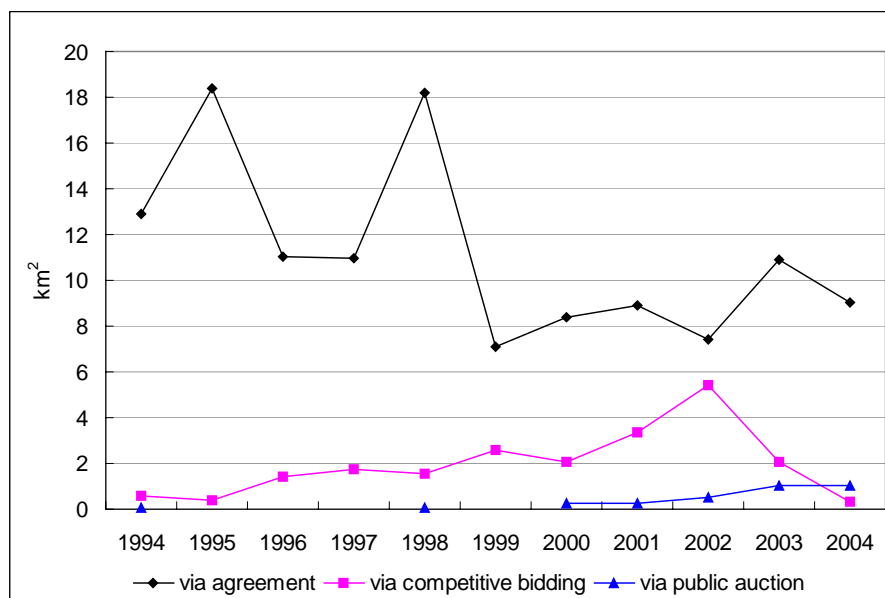


Figure 1 Areas of Allocated Land in Shenzhen by allocation methods, 1994-2004  
Data source: Shenzhen Real Estate Yearbook, 2005

In addition, a hidden land market had existed for some time before the *Provisions on Land Trading Market of Shenzhen* was issued in 2001. Some enterprises, especially state-owned enterprises, which have obtained the use right of a certain piece of land did not develop the land themselves. Instead, they subletted the land to other users under the guise of a joint project. They offered the land as their investment and enter into an agreement with another enterprise which provides the capital. Quite often, this type of development has caused economic disputes and led to a serious problem of corruption.

As a result, in practice, the intervention of government in both visible and invisible forms is still the major influence on the land market, a reflection of the ‘institutional thickness’ of the Chinese transition. Nevertheless, the reform in land allocation has encouraged foreign investors to come and set up their business.

### 2.3 Policies and Changes in Housing

The focus of Shenzhen’s housing reform is to change the form of allocation of housing from a physical allocation system to a monetarized system. The scheme can be summarized as stopping the physical allocation of housing, increasing rent and providing subsidy, encouraging house purchase and setting up a housing fund. The detailed operations included:

- (i) A system of Housing Provident Fund was also established in Shenzhen in 1992. Enterprises and their employers are both responsible for putting aside a certain amount of monthly savings. The amount was set as 13% of the employee’s salary in 1992. Both the enterprise and individual pay the same amount. The savings are owned by the employers and are exclusively used

for their purchasing, building, renovating and repairing of individually owned housing.

- (ii) Socialization of housing allocation. Housing reformers of Shenzhen have put forward the measure of socialization of housing allocation in the early 1990s through the regulation of the *Interim Provisions of Socialized Housing in Shenzhen Special Economic Zone*. The focus was to make the state, enterprises and individuals share the burden of housing construction.
- (iii) Miniaturization of houses. It was clearly stated in the *Reforming Scheme for Housing System in Shenzhen Special Economic Zone* that in a certain period, newly constructed houses should be minitype, i.e. in small unit size (under 70 m<sup>2</sup> in average for each unit), reasonable and practical. Houses with large area and elaborate decoration should be restricted.

Through these reform measures, the rigid connection of the individual and its employer in terms of housing has been broken. Shenzhen has established a new system of housing provision and allocation. Although it is claimed that land is still publicly-owned, the increased obtainability and transferability of land use rights have spurred booms in real estates development. Generally, there are three types of houses: policy-oriented housing, commodity-oriented housing and others. Commodity-oriented housing refers to market commodity houses constructed by real estate developers and supplied for the whole society. Other housing includes self-constructed houses. The policy-oriented housing includes ‘affordable housing’, ‘comfortable housing’ and ‘low rent housing’<sup>58</sup>.

However, despite of the reforms and changes in housing, some work units still provide houses for their employees as they used to do in the socialist era. Normally, these work units are highly-profitable state enterprises or government institutions such as research institutions that have capital for housing construction as part of the welfare for their employees. The differences between housing provision in the transitional era and the socialist era are that these houses may not necessarily be located within a walled neighborhood, and that the employees may have to pay a small amount of the cost of construction. Preferential policies are also given to government officials or staff in government agencies, who have privileges to acquire cheaper or higher-quality houses.

#### **2.4 Policies and Changes of FDI**

The foreign-oriented economy is a key feature of Shenzhen’s transitional development. The stable political environment and preferential policies had successfully attracted a large amount and wide variety of foreign capital. FDI not only engaged in capital construction, but has also played a vital role in starting and accelerating the growth of the transitional economy.

---

<sup>58</sup> These are different types of policy-oriented housing provided for qualified families with relatively low income:

Affordable housing, *jingji shiyongfang* in Chinese, is constructed by institutions or real estates developers in cooperation with the government and provided for families with permanent residence cards and an average annual income lower than 60,000 RMB. Other qualifications vary in different years.

Comfortable housing, *anjufang* in Chinese, refers to houses constructed with special-purpose state loans and local raised funds. It is supplied to local low income families, especially families with an average living space of less than 7 m<sup>2</sup>.

Low rent housing, *lianuzufang* in Chinese, is provided by the government. It is for rent only.

Ever since the opening up of the Shenzhen SEZ in 1980, the municipality has adopted a series of preferential policies to attract foreign capital in terms of forms and industries of investments, favourable taxes, use of land, sales of products, foreign exchange control and others such as allowing foreigner to enjoy citizen treatment since 1997. Compared to the development of GDP, the growth of FDI in Shenzhen is more related to political and foreign-oriented events than to economic planning. Two important related events can be singled out as overriding the effects of institutional thickness in the development of Shenzhen's FDI growth. The first is Deng Xiaoping's South Tour and Speech in 1992, which confirmed Shenzhen's opening direction and its success, and encouraged further FDI inflow. The second is China's entry into the World Trade Organization (WTO) in 2001, which stimulated a new wave of FDI (see figure 2).

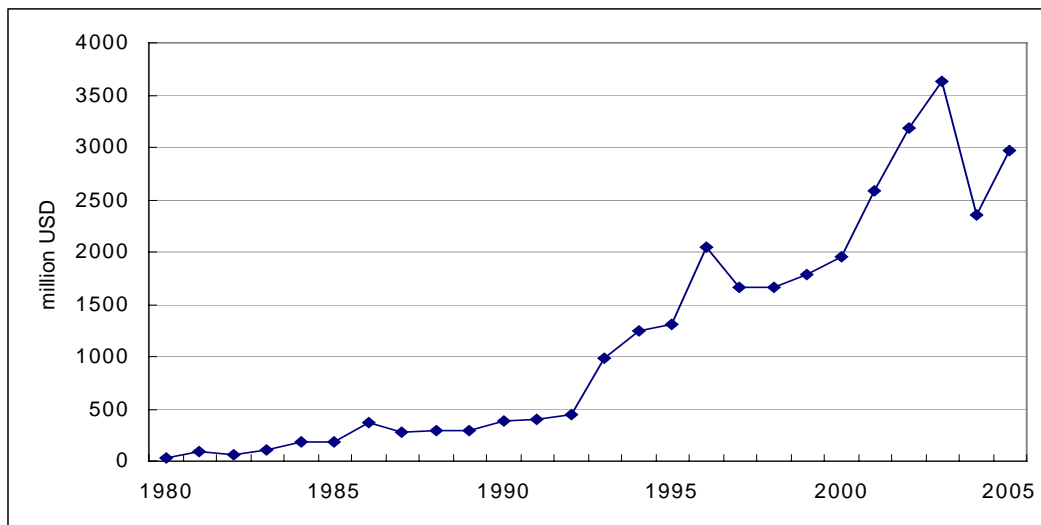


Figure2 Growth of FDI in Shenzhen, 1980-2005  
Data source: Shenzhen Statistical Yearbooks

In terms of industrial structure, the secondary industry has always been the favor of foreign investor. Incoming FDI has brought with it the world's advanced technologies and management skills as well as new viewpoints and life styles. These have broadened the spectrum of the transition. The growth and industrial structure of FDI and the differences among the districts of Shenzhen in these have demonstrated changes in the direction of FDI, which in turn have affected economic development and the development of the internal spatial structure of the municipality.

At the same time, the spatial distribution of foreign capital has also been varied over the past 25 years (see figure 3). From 1980-1985, an average of 89.6% of the total FDI was absorbed by the Shenzhen SEZ (*guanwei*), as construction and production then mainly focused in this area. This figure decreased fast during the period of 1990-2000 as production activities were relocated to *guanwai* (outside of the Shenzhen SEZ). Since 2000, *guanwai* still takes a big share of the total FDI, especially the district of Bao'an. By the end of 2005, Bao'an district alone attracted almost one third of the total FDI of the whole municipality.



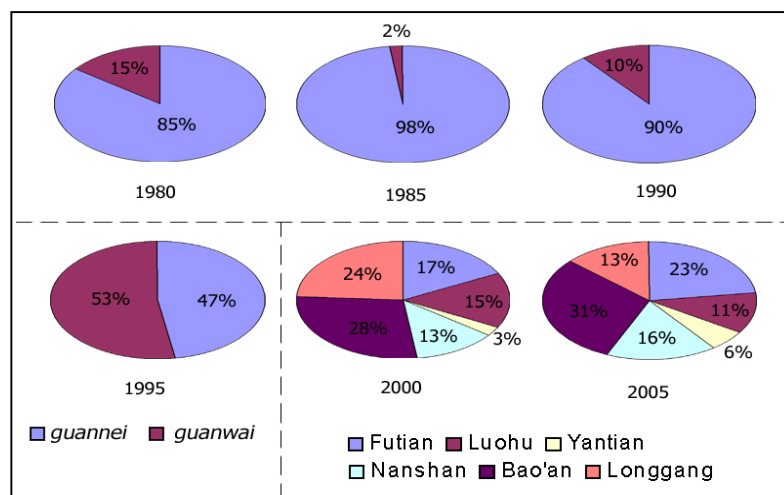


Figure 3 Distribution of Foreign Investment in Shenzhen, divided by *guannei* and *guanwai* or districts, in selected years

Data source: Statistical Annual Reports of each District, 2006, Shenzhen Yearbook 2001, statistical yearbook 1996, Statistical Data of Shenzhen's National Economy and Society, 1979-1985, Statistical Data of Shenzhen's National Economy and Society, 1986-1990

Note:

1. The *guannei* area, ie. the Shenzhen SEZ, is now divided into four districts of Futian, Luohu, Yantian and Nanshan. The *guanwai* area includes two districts of Bao'an and Longgang.
2. due to the limitation of data, the foreign investment for 2000 is actually utilized foreign capital, while those of other years are actually utilized Foreign Direct Investment.

## 2.5 Policies and Changes of Population

One of the results of fast economic growth and urban sprawl in Shenzhen is explosive population growth. Although the household registration system has been reformed and tight control of rural-urban migration has been relaxed to a certain degree, about 78% of Shenzhen's population holds temporary residence cards.

Shenzhen's household registration system has gone through three phases of change with accompanying changes in permanent and temporary residents growth, itself a process of progression in the transition (see figure 4):

- (i) 1980-1986: phase of *no control*. At the beginning of Shenzhen's transition, the massive capital construction and fast economic growth required a large amount of labor in a short span of time. So, there was no restriction on incoming migrants to get local residence cards. Although the municipal government formulated the *Plan for number of Staff and Workers* in 1984, restriction of household registration was still little practiced.
- (ii) 1987-2001: phase of *planned control*. The municipal government started to control the number of newly employed staff and workers in Shenzhen's enterprises in 1987, based on a preconceived plan. New recruits from outside whose employer was not included in the plan would not be given permanent registration cards. Starting from 2000, all immigrants are included in this planned control and the government started to charge a fee from immigrants for urban infrastructure investment.
- (iii) 2002-present: phase of *innovative reforms*. New measures have been considered for reducing differences between urban and rural residence and

loosening the restriction on getting local permanent residence. In 2002, the municipal government stopped charging the fee for urban infrastructure. An affiliated household registration system was initiated in 2003 to allow migrants to attach their residence cards to those of their relatives or friends, which is a pioneering reform in the transition in China.

In terms of employment structure, the secondary industry has been the main sector. However, its significance has been declining and the share of the tertiary industry has been increasing (see figure 5). On the other hand, with the development of industries, Shenzhen's demand for labor has transformed from mass and cheap labor in the beginning years of the transition to high-tech talents in 1990s and then to management personnel in the present more matured transitional economy.

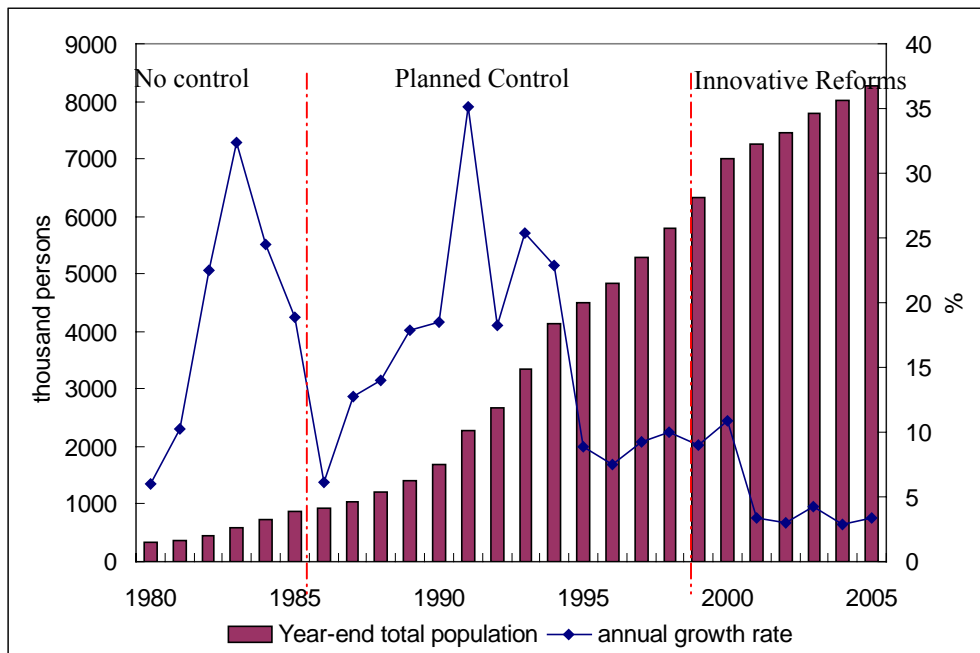


Figure 4 Year-end Total Population and Annual Growth Rate of Population in Shenzhen, 1980-2005

Data source: Shenzhen Statistical Yearbook, 2006

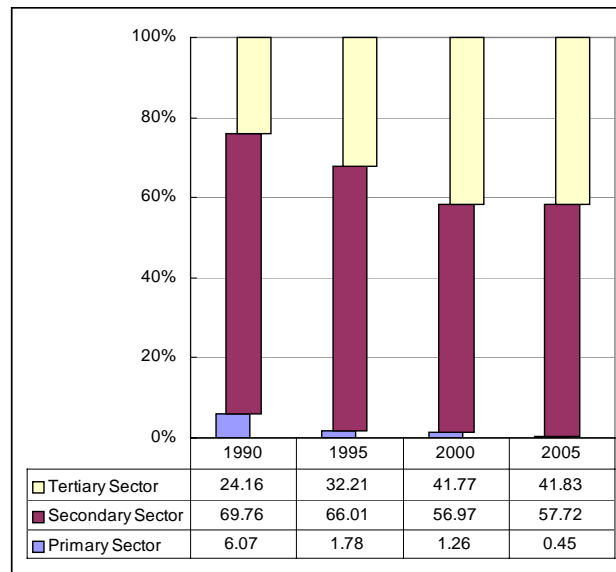


Figure 5 Distribution of Employment in Shenzhen by Sector, in selected years.  
Data source: Shenzhen Statistical Yearbook, 2003, 2006

### 3. Guidelines of the Three Rounds of Master Plan in Shenzhen

Besides the transitional drivers of institutions and policies, the master plans that have been formulated during the transitional period under study are also important in influencing Shenzhen's urban development by setting the guidelines for its economic and spatial growth.

The very fast growth pace of Shenzhen's economy and its spatial expansion have gone beyond all the objectives set by every master plan in the city's transitional history. This is a sign that the market is more difficult to manage and focus than central planning. However, a review of the development guidelines of each of the master plans shows the track of the city managers' changing ideas in developing Shenzhen in the transitional era (see table 1).

Table 1 Overview of the three rounds of Master Plan

	Planned Population (thousand)	Total Land Planned for Construction (km <sup>2</sup> )	Spatial Structure
1982 Master Plan for Shenzhen SEZ	80 (by 2000)	98 (by 2000)	Multi-centered Conglomerations
1986 Master Plan for Shenzhen SEZ	110 (by 2000)	122 (by 2000)	Belt-shaped Conglomerations
1996 Master Plan for Shenzhen Municipality	430 (by 2010)	480 (by 2010)	Network-based Conglomerations

The three conglomerations in the 1982 master plan were clearly related to the important land and sea ports as well as the old town. In addition, the first export-oriented economic development zone, Shekou Industrial Zone, is located on Nantou peninsula. This spatial arrangement and the strategic development sites were consistent with the strategy for attracting the traditional industries of Hong Kong to relocate into Shenzhen and help it to develop an export-oriented economy.

In the master plan of 1986, the Futian conglomeration was separated from the former Luohu Shangbu conglomeration. The area in the vicinity of Shennan Road of the east

side was planned for public and commercial buildings. It is the center of Futian district. Shahe conglomeration was added in-between Nantou and Futian as the built-up area expanded. Totally five conglomerations formed a belt along the coastline and became the skeleton of Shenzhen's spatial expansion.

As the activities were decentralized to the area outside the Shenzhen SEZ, The master plan made in 1996 included the whole municipality and is the plan that is still in practice. Based on the belt of conglomerations and major transportation lines, a new 'network-based' conglomeration system was planned, with 9 functional conglomerations and 6 satellite towns. The central conglomeration is composed of the two centers of Futian and Luohu. The total area is 74 km<sup>2</sup>. It is the political, economic and cultural center of Shenzhen municipality. At the same time, the boundary of Shenzhen Central District was delimited. It is located in Futian district, with a total area of 6 km<sup>2</sup>.

#### 4. Urban Economic and Spatial Transformations of Shenzhen

The original goal set by the state was to develop Shenzhen into a high level export-oriented commodity production base, combining manufacturing and agriculture, a tourism attraction for Hong Kong and Macau tourists, and a new type of border city. Twenty five years later, Shenzhen has become a large international city, with a total permanent residents (living in the city longer than half a year) of 8.3 million at year end of 2005. Its total built-up area has increased from 3 km<sup>2</sup> in 1979 to 713 km<sup>2</sup>. As discussed, the dynamics of transformation in the transition city of Shenzhen have decisively influenced the economic growth and spatial expansion of Shenzhen.

##### 4.1 Transformations of the Urban Economy of Shenzhen

The five key dynamics of Shenzhen's transitional development have gone through several rounds of reform during the past 25 years. The key time points were illustrated as figure 6. Overlaying this time chart with the annual growth rates of GDP and GDP per capita, three phases of development and the key players for each phase are identified (see figure 6).

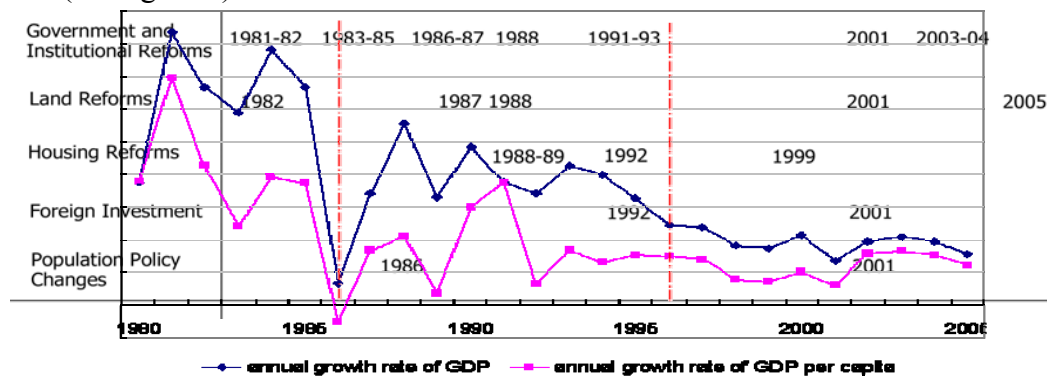


Figure 6 Key Players for each Development Phase of Shenzhen as a Transitional City

##### Phase I Preparation

The phase of *preparation* is predominantly characterized by mass infrastructure construction. The main tasks were to build up basic facilities for urban development, to improve the hardware to attract investment and to make preparation for further and long-term economic growth. During this period, reforms in the government,

institutions and land management as well as preferential policies, especially for attracting FDI were the key initiators of Shenzhen's fast growth. The growth rates stayed at a high level and fluctuated significantly over the five years.

#### *Phase II take-off*

In the second phase of *take-off*, the growth rate of GDP slowed down a little but still remained at a high level, fluctuating between 30% and 60%. A series of policies were initiated for managing population and employment growth as well as the fabrication of the land and housing markets. Both government and institutional reforms continued vigorously. As a result, more and more stakeholders were participating in the construction and development of the city, including Transnational Corporations (TNC), real estate developers, Non-government Organizations (NGOs), foreign investors, banking and financial service providers, etc. High-tech industries started to grow, gradually taking the leading role in industrial production. The economic structure was thus being modified. This is a period when multi-stakeholders are joining the process of social and economic development of Shenzhen as a transitional city and influencing the spatial distribution in a comprehensive way.

This period is also an important time when China's open and reform policies made break-through and the framework for the socialist market economic system was constituted. During this decade, Shenzhen's economic system was transformed from an industrial system with emphasis on electronics and export-orientation to a modern diversified economy which consists of high-tech industries, advanced tertiary industry and modern agriculture.

During this period, the guideline of development has changed from building foundation and constructing infrastructures for the economy to "improving cost-benefit, giving priority to industrial production and developing Shenzhen into an export-oriented, multi-functional modern city". The total GDP reached 84.3 billion RMB, ranking 6<sup>th</sup> among the cities of China. The annual growth rate fluctuated in the range of 30-60%. The share of the secondary industry in the GDP increased from 39.2% to 50.1%. The substantial and steady growth of the secondary industry had accelerated the process of industrialization, indicating that Shenzhen had been transformed from a traditional agricultural society into an industrial society.

#### *Phase III steady growth*

Starting from 1996, the growth rate of Shenzhen's GDP slowed down to a lower level but remained stable around 18%. After 15 years of preparation and take-off, the post-reform development of Shenzhen had reached a stage of *steady growth*. After Deng Xiaoping's South Tour in 1992, the political and social system of China had been stabilized and the environment for investment had been improved. China's entry into WTO in 2001 further embedded China's transitional economy more into the globalizing world. Shenzhen's industrial production and economic growth are thus maturing in this period. The multi-stakeholders continued to operate in this transitional urban economy and influenced its social and spatial structure.

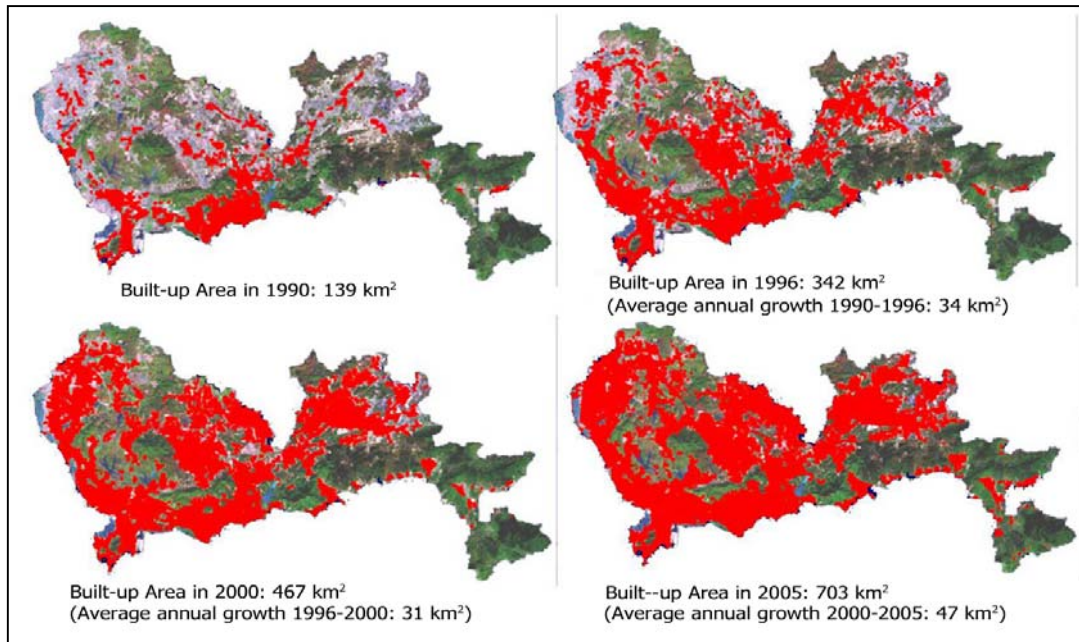
If the second phase is a period when "strengthening Shenzhen's economic might by fast industrial development", the third phase of ten years is characterized by "steady improvement with an optimizing industrial structure":

The structure of the manufacturing has changed over time. Firstly, high-tech industry has become the primary engine of industrial growth, especially the electronics and information industry. Since 2004, high-tech industry accounts for more than half of the total industrial output. Secondly, the share of heavy industry started to rise. In 2005, the output of heavy industry was 743.4 billion RMB, 73.1% of the total industrial output. Thirdly, the competitiveness of traditional industries has been enhanced, including garments, furniture, watch and clock, gold and jewelry. Finally, the industrial structure is still characterized by export-orientation.

In the meanwhile, tertiary industries, including finance and trade, logistics, tourism, real estates and agency services, were developed. Deposits and loans of financial institutions (including foreign funds) in 2005 were 948.7 billion and 759.7 billion respectively. In total, nine port areas have been built, i.e. Shekou, Chiwan, Mawan, Yantian, Dongjiaotou, Fuyong, Shayuyong, Xiadong and Neihe. In 2005, the total freight throughput of Shenzhen port reached 153.5 million tons, ranking fourth in the world, after Singapore, Hong Kong and Shanghai. The total investment in real estates in 2005 was 42.4 billion RMB, with a total floor space completed of 9.5 million m<sup>2</sup>.

#### **4.2 Spatial Changes of Land Uses**

The expansion rate of Shenzhen's built-up area in the past 25 years was amazingly fast. In 1980, the total built-up area was only 3.8 km<sup>2</sup>. By 1990, it expanded to 139 km<sup>2</sup>. The fastest growth was the period of 2000-2005, when average annual growth rate reached 47%. In 2005, the total built-up area accumulated to 703 km<sup>2</sup>. According to the *Shenzhen Territory Plan 2020*, the total land area suitable for construction in Shenzhen is 747 km<sup>2</sup>. Thus future expansion of urban construction in the transitional city will be limited (see Map 1). At first, production activities were concentrated within the SEZ. Later, with increasing demand for production space and the proliferation of preferential policies, activities were distributed to the area outside the SEZ (*guanwai*) along major transport routes, towards the north, northwest and northeast. It was a process of decentralization – decentralization of productive, economic and living activities.



Map1 Built-up Area of Shenzhen in 1990, 1996, 2000 and 2005

Source: Shenzhen Municipal Bureau of Urban Planning

The transformations of the spatial pattern of Shenzhen as a transitional city can be summarized as the following:

- (i) Land and housing reforms accelerated land conversion. Regulated by market mechanisms and land rents, production activities and most of residential land use were pushed out of the city center, leading to a process of suburbanization due to the decentralization of production activities.
- (ii) Revenue from real estate development has aroused enthusiasm of the government for land development. The development of the city center is of high density. The municipality has grown into a polycentric city with a high density core.
- (iii) Major micro elements have emerged in the urban spatial structure :
  - a) Dual-centers. The old commercial center in Luohu and the new CBD form the dual-centers. They are the areas with the best accessibility, highest density of construction and highest rent values.
  - b) High-tech zones: high-tech zones have been established by local governments in almost all cities in the transitional China. This is also the case for Shenzhen. A development plan for a Shenzhen high-tech industrial belt was formulated in 2002. Most high-tech zones are located in the suburbs and are expected to attract investment and become the growth engines of the local economy.

In this study, spatial changes of industrial, commercial and residential land uses were traced and analyzed to demonstrate the characteristics of the spatial expansion of the transitional city of Shenzhen. Putting the layout of all the current land uses together, we summarize the conceptualized spatial and functional structure of the transitional city of Shenzhen as figure 7 shows:

- (i) The city structure of Shenzhen is primarily divided into city core – the dual-center, the inner ring – *guannei* and the outer ring – *guanwai*. The main roads, highways, railroads, airport, ports and border checking points are the most important internal and external linkages of Shenzhen. They are the “seedbeds” for the urban sprawl and also the skeleton of the city structure.
- (ii) The dual-centers of Luohu and Futian include the municipal government, the CBD of Shenzhen, the two highest rank shopping areas of *Dongmen* and *Huaqiangbei*.
- (iii) Within the SEZ, key industrial zones include the Shenzhen high-tech industrial zone, Shekou Industrial Zone and the three tax-free zones of Futian, Shatoujiao and Yantian. In *guanwai*, several industrial clusters have been formed, i.e. Shenzhen International Airport, Shenzhen Grand Industrial Zone, the western industrial conglomeration, Shiyan Industrial Zone and Central industrial conglomeration.
- (iv) Seven sub-centers can be identified in the inner and outer ring of the urban area. They have a close relation with the dispersed industrial zones or conglomerations. These sub-centers are located along major transportation lines. The city is formed through major decentralization and suburbanization processes and has turned into a multi-nuclei spatial system.

In a word, the spatial pattern of today’s Shenzhen, after 25 years of transitional development, is guided by increasing market forces as well as regulation of the government through planning. The unique institutions of the city, the different level of government intervention and the immature market system have shaped the city in a way that is both different from the socialist cities and the advanced western cities.



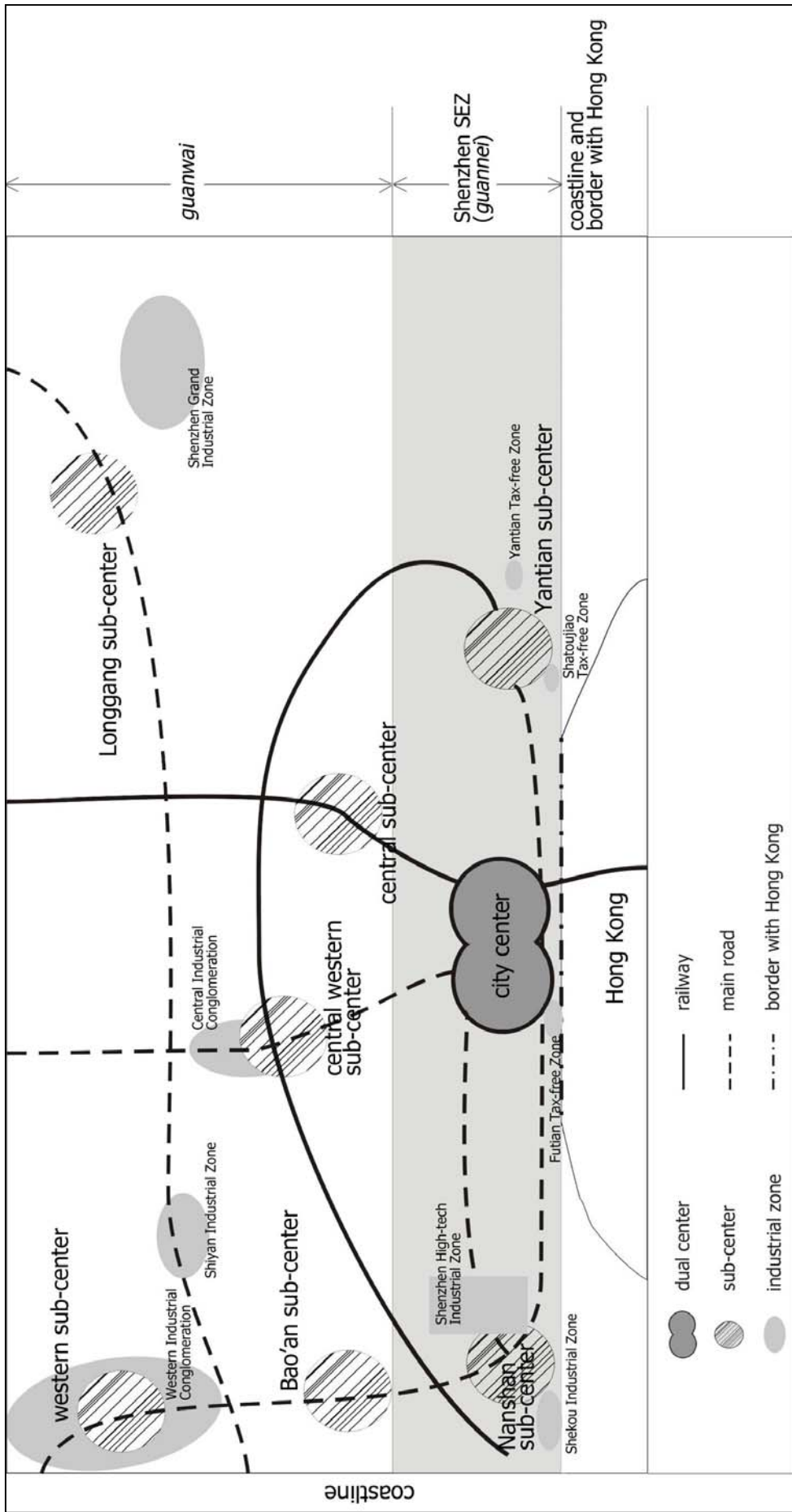


Figure 7 Spatial and Functional Structure of the Transitional City of Shenzhen, 2005

## **5. Shenzhen: A New Type of City?**

Conclusions on Shenzhen's economic and spatial transformations as a transitional city are only one part of this study. To answer the question whether Shenzhen is a new type of city, a comparison study of Shenzhen against the Chinese socialist city, the transitional cities in the EE and the Western capitalist city is needed. As time is limited in this MPhil study, we have made an attempt in this area and hope that it attracts interests and further exploration by other scholars.

This comparison research is based on the findings of our study on the specific case of Shenzhen and the conclusions of others' work. Distinct characteristics of Shenzhen are recognized to support the argument that the Chinese transitional city is a new type of city which is different from Chinese socialist cities and the Western capitalist city. On the other hand, although contemporary cities in China and Eastern Europe are both "transitional cities", there are differences between them due to their development histories and transition strategies. Hence they should be defined in two sub-categories (see table 2 & 3).

## **6. Discussions**

In this study, the characteristics of Shenzhen as a transitional Chinese city have been summarized. The trajectory of urban development, the dynamics of transition and the economic and spatial outcomes are examined and analyzed.

Comparisons of the transitional city of Shenzhen, Eastern Europe and the Western capitalist cities shed some light on the differences between these cities, which are under the influence of differing political systems and driving forces. The analysis is rather superficial due to the lack of availability of data in the literature and materials. However, this topic is of importance and requires further investigation in future.

It should also be noticed that Shenzhen may not be a typical example of the Chinese transitional cities in terms of its special strategic status, geographical location, pace of growth, intensity of FDI utilization, etc. However, it serves as an individual case of the contemporary Chinese city and has indicated that the Chinese transitional city is different from the typical Chinese socialist city and Western capitalist city, or even different from transitional cities in the EE. This is a pioneering study on exploring the characteristics and distinctions of a specific transitional city in a rapidly-developing China. We have achieved our purposes as set out in the research plan. In turn, it shows that similar case studies on other cities in transitional China are needed. In these future following-up studies, dynamics that affect the transition, besides those examined in this study, will need to be considered, such as the location and position of the city, the history of development, the degree of path dependency, the performance of the local government, etc. Hopefully, with these additional efforts, we may arrive at a better understanding of the Chinese contemporary cities as a new type of city, as well as for learning from successful experiences and avoiding mistakes in the management and planning of the Chinese transitional city.

Table 2 Contrasting Characteristics of the former Socialist City and Shenzhen, as a transitional city of China

	Socialist Chinese City	Shenzhen, China
Urbanization	<ul style="list-style-type: none"> <li>- industrialization without urbanization</li> <li>- strict control over rural-urban migration</li> <li>- planned and controlled mass migration, such as <i>shangshan xiexiang</i></li> </ul>	<ul style="list-style-type: none"> <li>- Fast urbanization</li> <li>- reforms of the household registration system loosened the strict control of rural-urban migration</li> <li>- suburbanization</li> </ul>
Urban Function	<ul style="list-style-type: none"> <li>- production</li> </ul>	<ul style="list-style-type: none"> <li>- consumption</li> </ul>
Government Function	<ul style="list-style-type: none"> <li>- direct control of the development through central planning</li> <li>- administrator</li> </ul>	<ul style="list-style-type: none"> <li>- proactive role of the urban government</li> <li>- indirect supervision</li> <li>- service provider</li> </ul>
Urban Economy	<ul style="list-style-type: none"> <li>- Predominance of productive activities</li> <li>- Depression of non-productive activities, such as commercial and service sectors, etc.</li> <li>- No clear division of labor</li> <li>- a closed and self-sufficient system with high military concern.</li> </ul>	<ul style="list-style-type: none"> <li>- Growth of the tertiary sector.</li> <li>- Rise of informal sector</li> <li>- explosion of consumerism</li> </ul>
Urban Spatial Structure	<ul style="list-style-type: none"> <li>- Urban planning and urban design, seeking optimum city size and urban structure (but actually, agglomeration became a major characteristic)</li> <li>- Characterized by squares and monumental places at the centre</li> <li>- Great uniformities of spatial distribution</li> <li>- Community based on workplaces</li> </ul>	<ul style="list-style-type: none"> <li>- the old commercial center and the new CBD form the dual-center of the city.</li> <li>- a variety of buildings and construction. Tall buildings change the skyline of the city.</li> <li>- polycentric</li> <li>- Community based on residence</li> </ul>
Society /Urbanism	<ul style="list-style-type: none"> <li>- less urbanism</li> <li>- the workers are highly dependent on their workplace</li> <li>- elimination of the bourgeoisie</li> </ul>	<ul style="list-style-type: none"> <li>- Changing from a socialist rank order to an emergent class-based stratification.</li> <li>- Reduction of workers' dependency on the workplaces</li> </ul>

Table 3 Contrasting Characteristics of the Western Capitalist City, the Transitional City in the EE and Shenzhen, as a transitional city of China

	Transitional City in the EE	Shenzhen, China	Western Capitalist City
Dynamics	<ul style="list-style-type: none"> <li>- “Big Bang” approach: abandoning the socialist ideology overnight</li> <li>- market regulation</li> </ul>	<ul style="list-style-type: none"> <li>- stable political environment with the Communist Party remaining at the center of power</li> <li>- non-complete market mechanism</li> </ul>	<ul style="list-style-type: none"> <li>- Market Forces</li> <li>- democratic political system</li> <li>- advancement in technology</li> </ul>
Transformation	<ul style="list-style-type: none"> <li>- fast and complete privatization</li> <li>- unregulated market mechanism</li> <li>- deindustrialization</li> <li>- economic globalization</li> <li>- housing reforms</li> </ul>	<ul style="list-style-type: none"> <li>- land and housing reforms</li> <li>- emergence of market forces</li> <li>- loosen control of rural-urban migration</li> </ul>	/
Urban Economy	<ul style="list-style-type: none"> <li>- “vacuum period”</li> <li>- not very much strong draw of foreign investment</li> <li>- street trading</li> </ul>	<ul style="list-style-type: none"> <li>- Growth of the tertiary sector.</li> <li>- Rise of informal sector</li> <li>- explosion of consumerism</li> <li>- street trading</li> </ul>	<ul style="list-style-type: none"> <li>- predominance of tertiary sector, particularly producer services.</li> </ul>
Urban Form	<ul style="list-style-type: none"> <li>- compact, with slightly less homogeneity</li> <li>- Western style CBD</li> <li>- a zone of mixed socio-economic clusters</li> <li>- Subcenters are scattered in strategic locations</li> <li>- A large amount of agricultural land in suburban zone is turned into residential and commercial uses</li> <li>- Industrial activities are also decentralized to the outer zone</li> </ul>	<ul style="list-style-type: none"> <li>- the old commercial center and the new CBD form the dual-center of the city.</li> <li>- a variety of buildings and construction. Tall buildings change the skyline of the city.</li> <li>- polycentric</li> <li>- decentralization of urban activities and suburbanization changed agricultural land use in the outer zone</li> </ul>	<ul style="list-style-type: none"> <li>- CBD, as the hub for commercial, social, political and cultural life</li> <li>- residential segregation</li> <li>- suburbanization</li> <li>- polycentric</li> </ul>
Society /Urbanism		<ul style="list-style-type: none"> <li>- Changing from a socialist rank order to an emergent class-based stratification.</li> <li>- Reduction of workers’ dependency on the workplaces</li> </ul>	<ul style="list-style-type: none"> <li>- personal choices</li> </ul>

## 7. References

- Bater, J. H. 1980. *The Soviet City: Ideal and Reality*. London: E. Arnold.
- Bourne, L. S. 1982. *Internal Structure of the City: Readings on Urban Form, Growth, and Policy*. 2nd ed. New York: Oxford University Press.
- Gaubatz, P. 1995. Urban Transformation in Post-Mao China: Impacts of the Reform Era on China's Urban Form. In *Urban Spaces in Contemporary China: The Potential for Autonomy and Community in Post-Mao China*, eds. D. S. Davis, R. Kraus, B. Naughton and E. J. Perry, 28-60: Woodrow Wilson Center Press and Cambridge University Press.
- . 1998. Understanding Chinese Urban Form: Contexts for Interpreting Continuity and Change. *Built Environment* 24 (4):251-267.
- . 1999. China's Urban Transformation: Patterns and Processes of Morphological Change in Beijing, Shanghai and Guangzhou. *Urban Studies* 36 (9):1495-1521.
- Guan, Y., C. Guan, and Z. Zhou. 2006. The Transformation of Urban Space with Upgrading Economic Function: the case study of Shenzhen City. *Areal Research and Development (in Chinese)* 25 (1):58-61.
- Harloe, M. 1996. Cities in the Transition. In *Cities After Socialism: Urban and Regional Change and Conflict in Post-Socialist societies*, eds. G. Andrusz, M. Harloe and I. Szelenyi: Blackwell Publisher.
- Kovács, Z. 1998. Ghettoization or Gentrification? Post-socialist Scenarios for Budapest. *Journal of Housing and the Built Environment* 13 (1):63-81.
- . 1999. Cities from State-socialism to Global Capitalism: an Introduction. *Geojournal* 49 (1):1-6.
- Lin, G. C. S. 2002. The Growth and Structural Change of Chinese Cities: a Contextual and Geographic Analysis. *Cities* 19 (5):299-316.
- Sit, V. F. S. 1985. Introduction: Urbanization and City Development in the People's Republic of China. In *Chinese Cities: The Growth of the Metropolis since 1949*, ed. V. F. S. Sit, 1-66: Oxford University Press.
- . 1995. *Beijing: The Nature and Planning of a Chinese Capital City*. Edited by R. J. Johnston and P. Knox, *World cities Series*. Chichester: John Wiley & Sons Ltd.
- . 1999. Social Areas in Beijing. *Geografiska Annaler. Series B, Human Geography* 81 (4):203-221.
- . 2000. A window on Beijing: The social geography of urban housing in a period of transition, 1985-1990. *Third World Planning Review* 22 (3):237-259.
- Saich, T. 2004. *Governance and Politics of China*. New York: Palgrave Macmillan.
- Sailer-Fliege, U. 1999. Characteristics of Post-socialist Urban Transformation in East Central Europe. *Geojournal* 49 (1):7-16.
- Sýkora, L. 1994. Local urban restructuring as a mirror of globalisation processes: Prague in the 1990s. *Urban Studies* 31 (7):1149.
- . 1999. Changes in the Internal Spatial Structure of Post-communist Prague. *Geojournal* 49 (1):79-89.
- Szelényi, I. 1983. *Urban Inequalities under State Socialism*. Oxford: Oxford University Press.

- . 1996. Cities under Socialism - and After. In *Cities after Socialism: Urban and Regional Change and Conflict in Post-Socialist Societies*, eds. G. Andrusz, M. Harloe and I. Szelenyi, 286-317: Blackwell Publishers.
- Walder, A. G. 1995. China's Transitional Economy: Interpreting its Significance. *The China Quarterly* 144 (Special Issue: China's Transitional Economy):963-979.
- Wang, F. 2003. *Research on Shenzhen's Urban Spatial Evolvement*, PhD dissertation, College of Environmental Sciences, Peking University, Beijing.
- Wu, F. 1995. Urban Processes in the face of China's Transition to a Socialist Market Economy. *Environment and Planning C: Government and Policy* 13 (2):159-177.
- . 1997. Urban Restructuring in China's Emerging Market Economy: Towards a Framework for Analysis. *International Journal of Urban and Regional Research* 21 (4):640-663.
- . 2002. The Transformation of Urban Space in Chinese Transitional Economy: with Special Reference to Shanghai. In *The new Chinese City: Globalization and Market Reform*, ed. J. R. Logan, 154-166. Oxford: Blackwell Publishers.
- . 2003. The (post-) socialist entrepreneurial city as a state project: Shanghai's
- Zhang, L. 2003. *China's Limited Urbanization under Socialism and beyond*. New York: Nova Science Publisher, Inc.

## **Sustainable Small House Policy in Hong Kong**

**Che Keung YEUNG**

*Department of Public and Social Administration, City University of Hong Kong,  
Kowloon*

### **Abstract**

The New Territories (NT) in Hong Kong occupies about 88 per cent of the whole area in the city. Over the last four decades, the continuous urban sprawl and suburbanization triggered by the socio-economic and demographic changes have given a facelift to the physical outlook of the area. In the meantime, they have also led to degradation of the natural environment. Despite the emphasis of sustainable development in the 1999 Policy Address, the Hong Kong 2030 and the formation of the Council for Sustainable Development, insufficient considerations have been given to optimize the land use in the New Territories. This paper aims to examine one of the long-standing unsustainable land policies in Hong Kong - the Small House Policy (SHP).

Introduced in 1972, the SHP allows an indigenous male villager who is 18 years old and is descended through the male line from a resident in 1898 of a recognized village, an entitlement to one concessionary grant during his lifetime to build one small house. So far, some 30,000 small houses have been built. However, by the end of January 2006, there were 11,900 outstanding small house applications which might take a decade or more to be cleared, assuming no new application is received. Given the scarcity of land in Hong Kong, the SHP is intrinsically flawed. It is inherently in conflict with the sustainable development principles, namely: inter- and intra-generational equity; risk aversion strategies; conservation of bio-diversity; internalization of environment cost; and enlightened institutions. It is argued in this paper that the SHP in its existing configuration is outdated and unsustainable with regard to the present and future social and economic settings. While the termination of the policy is unlikely given the potential political implications, it is nonetheless urged that some reforms are necessary for minimizing the negative externalities to the environment. In this connection, it is suggested that the compact city concepts should be used to make the small house development more efficient in the utilization of the scarce land resources in the NT. Specifically, apart from the intensification of land use, it is imperative to confine the extent of the development to attractive locations served by mass public transport. Besides, a flexible and people-oriented approach should be adopted with respect to the built-form vis-à-vis the characteristics of a locality. Above all, a policy supportive of the reforms is fundamental.

## Urban Redevelopment and Rehabilitation



# **Urban Renewal in Shanghai: A Case Study on Role of the Borderland between Old and New in the Creation of Socio-Spatial Identities**

**Deljana IOSSIFOVA**

*Tokyo Institute of Technology, Tokyo, Japan*

## **Abstract**

During the past decades, (re-)development has led to a drastic transformation of China's urban landscape. Grown and run-down neighbourhoods are either disappearing to give way for new developments, or maintain their existence in immediate proximity to the latter. Spatial juxtaposition of neighbourhoods contrasting in structure, condition, and use - particularly perceivable at the borderlands around and between them – thus makes for a typical attribute of the contemporary Chinese city.

This paper follows up on a recent case study on everyday life on the borderland between an old neighbourhood and a new compound in the city of Shanghai. By means of observation and interviews (particularly utilizing the technique of photo elicitation), the present study aims to explore further the role the borderland plays in the construction of socio-spatial identities for the diverse actors impacted by urban renewal. Among those actors are long-term inhabitants of the old neighbourhood, residents awaiting relocation due to demolition of their homes, migrants of different background settling into the area, and residents of the new compound. Issues addressed will include those of the actors' relation to their changing environment; their participation in and perception of the ongoing socio-spatial transformation; their means of interaction with each other; their utilization of the borderland as a way of integration - or segregation. Are borders and the borderland between neighbouring old and new parts of the city significant for the creation and establishment of the inhabitants' identities?

## **Beijing: Lost in Translation?**

**Eric J. HEIKKILA**

School of Policy, Planning, and Development  
University of Southern California  
Los Angeles, CA, 90089-0042  
Tel: +1 213-743-2002  
FAX: +1 213-743-2476  
Email: heikkila@usc.edu

### **Abstract**

This paper is an exploration of three premises:

1. Material urban form generally constitutes part of an implicit language through which cultural expression is manifest
2. Beijing's hutong neighborhoods and courtyard housing constitute part of a language form that is intrinsically expressive of traditional Chinese culture
3. As hutong neighborhoods are replaced by more modernistic urban forms, an important part of Chinese culture is, quite literally, lost in translation

The paper is unique in postulating a linguistic theoretical framework for analyzing the changes occurring in Beijing's urban form. It is only with a linguistic model that one can explicitly posit that something important is being said in the source language. From this perspective, questions of translatability follow immediately, naturally, and inevitably.

### **1. Introduction**

Beijing is undergoing rapid transformation in the face of powerful globalizing and modernizing influences. The extent and character of this transformation suggest that Beijing is being "replaced" as much as it is being "developed". The classical characteristic physical form of the city – whereby grand imperial structures are surrounded by traditional neighborhood hutongs – is steadily being replaced by an architectural form that strives to present a "modern" image worthy of, say, an Atlanta or Dallas. The sense of urgency underlying this process of urban replacement has become increasingly palpable, with the 2008 Olympic Games providing its exclamation point. The driving forces behind this transformation are multifaceted (Heikkila, 2007), but at root modernization is seen as a key basis of legitimacy for China's political leadership, and as a means of restoring a rightful sense of pride for China in its place among the nations of the world. The capital region of Beijing is one of the premier showcases for these accomplishments.

This paper examines whether or not something irretrievable is lost as a result of this radical transformation in Beijing's urban form. The theoretical model adapted for this purpose is a linguistic one, indeed I push the linguistic analogy rather vigorously here to see how much it can sustain. The next section begins by examining various lines of argument that stress the communicative aspects of urban form, including the literature on urban semiotics, pattern language and spatial syntax. This first section also

investigates the linguistics literature itself to ascertain what is meant by language, with special emphasis on Chomsky's notion of innate grammar. The power and scope of Chomsky's thinking in turn is reflected, as we shall see, in three very distinct and seemingly unrelated ideas: Pierre Bourdieu's habitus, George Stiny's shape grammar, and Michel de Certeau's rhetoric of walking. In a rather adventurous bout, section one also experiments with some "spatial sentences" as a means of underlining the potential communicative qualities of urban spatial form.

These excursions are admittedly and necessarily speculative in nature. They are also highly suggestive. The purpose is to provide a broad overview of a fairly extensive scholarly discourse linking language to urban form. Of course the argument here is not that urban form is in and of itself a distinct natural language that can stand alone on par with, say, French or Japanese. Instead, I suggest that it is an intrinsic part of a much broader communicative system that includes languages as more narrowly defined. In this context I also underline the importance of ideas expressed by the applied mathematician Nikos Salingaros regarding the connectedness and consistency of related pattern languages.

It is in section two that these ideas are articulated specifically in the context of Beijing's traditional hutong neighborhoods. Drawing heavily on the work of Liangyong Wu, and using examples from Chinese written language, section two illustrates some striking parallels in the compositional character of both. In particular, both systems are marked by a distinctive recursive structure of embedded meaning. This lends support to the proposition that both communicative systems (ie, urban form and written text) are derivative of a single more broadly unified language system. The suggestion here is that it is no accident that one should find similar communicative approaches within a single cultural setting, as both are reflective of an underlying cultural mindset.

It is in this context that arbitrary dismantlement and replacement of one communicative system with a more modernistic one may cause a disjuncture in meaning. That is, to the extent that new urban structures in Beijing are not consistent with the broader language mindset characterized there, then something essential about Beijing is quite literally lost in translation. That is the proposition that is explored in the third section of this paper. The payoff from this linguistic approach is that it can help direct our attention to the "what" of what is being "said" through urban form. Not all languages are equally well suited to all manner of expression; and in the case of Beijing, the rapid ongoing replacement of Beijing's hutong neighborhoods is quickly rendering the original expression mute.

The paper proceeds, then, with an exploration of three linked premises:

1. Material urban form constitutes part of a broader communicative language system through which cultural expression is manifest;
2. Beijing's hutongs manifest a language form that is intrinsically expressive of traditional Chinese culture; and
3. As hutongs are replaced by more modernistic urban forms, an important aspect of Beijing is, quite literally, lost in translation.

## **2. First premise: The language of material urban form**

### **2.1 Urban form as language**

### 2.1.1 Urban Semiology

The urban semiology literature is replete with references to the *city as a text*, and to the implicit linguistic properties of cities. To quote (famously) from Barthes (1986),

*"The city is a discourse ... and this discourse is truly a language: the city speaks to its inhabitants, we speak our city, the city where we are, simply by living in it, wandering through it, by looking at it."*

Barthes' quote is emblematic of the field of urban semiotics, or the study of symbols as signifiers in an urban context. While the link to language is explicit in urban semiology, the link to a coherent linguistic structure is not. As Umberto Eco (2000) asserts, semiotics has as its object of inquiry a series of interpretants -- "interpretants being a collective, public observable product laid down in the course of cultural processes, *even though one does not presume the existence of a mind that admits of, uses, or develops them*" (my emphasis).

Barthes' reference to wandering through a city also evokes Michel de Certeau's (1984) notion of *pedestrian speech acts*: "The act of walking is to the urban system what the speech act is to language or to the statements uttered ... a rhetoric of walking ... the long poem of walking manipulates spatial organizations." By emphasizing the rhetorical aspect of walking, de Certeau draws a formal distinction between the linguistical system -- in our case that of a particular urban spatial setting -- and the speech act itself. It is not the detailed grammar of spatial form that interests de Certeau; instead, it is how individuals choose to express themselves within the broad parameters of any given grammatical system. Of course, even the most idiosyncratic enunciative strategies will be shaped by the structure of the language that contains them<sup>59</sup>. As we shall see, de Certeau's ideas link quite explicitly to Chomsky's distinction between linguistic competence and performance, where walking is a performance act.

### 2.1.2 Pattern language

Another link between urban form and language in the urban planning literature is that of *pattern language*, attributed to Christopher Alexander (1977), but perhaps most clearly expostulated by the applied mathematician Nikos Salingaros (2000, 2005 chapter 8). From this perspective, patterns are represented somewhat abstractly as nodes in a graph, and the "language" combines the nodes together into an organizational framework, as represented in figure 1.

---

<sup>59</sup> de Certeau acknowledges this point explicitly in the preface to the English translation of his work: "within the bounds imposed by another language and another culture, the art of translation smuggles in a thousand inventions which, before the author's dazzled eyes, transform his book into a new creation".

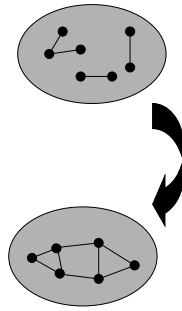


Figure 1 Lower level patterns combine to form higher level patterns  
From Salingaros (2000), after Alexander et al (1977).

One suspects that the somewhat vague interpretation of "nodes in a graph" as a generalizable representation of complex interactions is a double-edged sword for Alexander and company. On the one hand, the level of abstraction increases its potential applicability across a wide domain. On the other hand, it calls into question the applicability of the concept to any given concept of language is evoked. In fact, Salingaros (2000) is quite clear on this point:

*"A pattern language is more than just a patterns catalogue ... [a catalogue] does not give a script; it has no rules for flow, internal connections, or ordered substructures ... Words without connection rules cannot make up a language... A language tells you which of them can be combined, and in what manner, in order to create a higher-level pattern."*

Salingaros goes on to describe the generalizable process by which learned pattern languages are codified into religions, myths, and literary epics which serve as repositories for the pooling of collective intelligence accumulated over generations. It is not difficult to ascribe a similar repository function to urban forms. In his own way, Salingaros (2000) restates the rhetorical possibilities inherent in any over-arching design framework:

*"A set of connected patterns provides a framework upon which any design can be anchored. The patterns do not determine the design. By imposing constraints, they eliminate a large number of possibilities while still allowing an infinite number of possible designs."*

Not only is this reminiscent of de Certeau's rhetorical emphasis, it is also a specific problem setting. Our immediate concern, however, is the manner in which the factly consistent with the basic problem of linguistics: how is it that we choose what to say within the confines of any particular grammatical system.

### 2.1.3 Space syntax

Another strand of the urban planning literature connecting urban form explicitly with language is that of *space syntax* (Hillier and Hanson, 1984; Hillier, 2000). In a linguistic context, the function of syntax is "to describe the structure of a sentence and thereby to define it" (Palmer, 1981). In a similar vein, space syntax seeks to describe the structure of spatially rooted interactions. Hillier's approach is largely an empirical

one, where data on social interactions such as pedestrian flows or crime incidents are correlated in systematic fashion with the spatial forms or patterns that contain those interactions. The results of such empirical investigations, where conclusive, can then be used to shape social interactions through conscious design. Although this approach may well be useful for the purpose for which it is intended, it does not shed light on the linguistic properties of spatial forms in the sense that I intend here. In order to tap such linguistic insights more directly, I turn now to the field of linguistics, especially works by Noam Chomsky and his followers<sup>60</sup>.

## 2.2 Linguistics

### 2.2.1 Competence and performance

Noam Chomsky (1979) defines linguistic competence as "that knowledge internalized by a speaker of a language, which, once learned and possessed, unconsciously permits him to understand and produce an infinite number of new sentences." In contrast, process models are models of performance. *Competence models* address how we can speak; *performance models* address what we choose to say. This distinction between linguistic competence and linguistic performance is precisely the same as that put forward by de Certeau (1984), who acknowledges Chomsky in describing the rhetoric of walking as a model of performance.

### 2.2.2 Universal grammar

Over the course of half a century Chomsky has argued consistently that language is innate to human beings, and that the mental structures that support linguistic competence are hard wired in our brains in much the same way as are the mental structures that enable us to make sense of visual inputs. According to Chomsky (1979), generative grammar is the explicit theory proposed to account for linguistic competence; it describes the transformations by which linguistic competence at a "deep structure" is manifest at the "surface structure" of language. The deep structure of a language accords with its internal representation. From this view, linguistic competence is innate to human psychological development. In a more recent work<sup>61</sup> Chomsky (2000) reaffirms that psychological linguistics concerns the process by which deep internal structures are transformed into specific surface structures<sup>62</sup>. In figure 2 I present an initial, highly simplified and stylized, graphic representation of this process, which I shall then modify and adapt later on in this paper.

---

<sup>60</sup> The influence of Noam Chomsky on the field of linguistics is truly profound. Neil Smith's (2003) clearly expounded book on Chomsky ranks him in the company of Picasso, Einstein and Freud in terms of the magnitude of his impact.

<sup>61</sup> The title of this book, appropriately enough for our purposes, is *The Architecture of Language*.

<sup>62</sup> The terminology has evolved over the decades. In later work, especially in conjunction with his *Minimalist Program* (Chomsky, 1995), Chomsky drops his use of "deep" versus "surface" structures of language, but he does continue to draw a distinction between I-language and E-language.

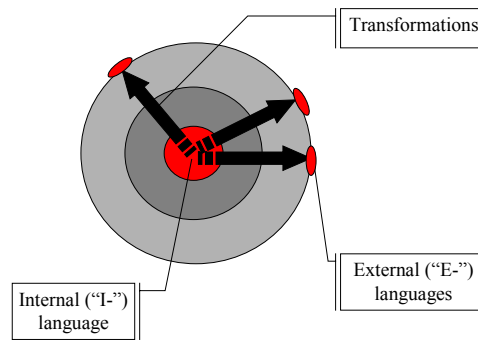


Figure 2 Generative grammar

Here, deep internal structures ("I-language") are manifest at an external or surface level ("E-language") via transformations that define the essential grammar of a language. The *principles and parameters* approach characterizes Chomsky's work in the context of his Minimalist Program (see, for example, Chomsky 1995). Applying one set of binary parameters to a transformation yields, say, Japanese, while another set of parametric values generates French. To cite just one example, a specific parameter might delineate languages (such as English) that place verbs prior to objects from those languages (such as Japanese) that use the reverse ordering. In keeping with this tradition, Baker (2001) and Newmeyer (2005) use the principles and parameters approach to show how the vast range of human languages can be classified in relation to one another. In an analogous manner, it may be possible to distinguish between different styles of architectural form, and indeed George Stiny's "shape families" would appear to be a clear step in that direction. From this perspective, differences between surface grammars, while real at one level, are not intrinsic to I-language. It posits that an extensive class of transformations differ from one another only with respect to these underlying principles and parameters. Bierswisch (1999) extends this approach to incorporate spatial concepts explicitly, postulating an I-space corresponding to Chomsky's I-language. According to Bierswisch, "I-space is accommodated by semantic form in terms of primitives interpreted by strictly spatial concepts".

### 2.3 Other generative grammars

From a Chomskian perspective incorrect language use arises when uttered sentences are inconsistent with the underlying grammatical transformations that are intrinsic to that particular language. There is an infinite number of correct sentences that might be uttered, but they constitute a miniscule proportion of the incorrect sentences that might also be uttered. This same idea carries over into two other influential scholarly traditions that are relevant to our discussion of urban form.

#### 2.3.1 Shape grammar

A promising line of research extending Chomskian linguistical concepts to the spatial domain is that of *shape grammar* as introduced by George Stiny. According to Stiny (1980):

*"In a shape grammar, the shapes in the set S and the symbols in the set L provide the building blocks for the definition of shape rules in the set R and the initial*

*shape I ... Shapes generated using the shape grammar are also built up in terms of these primitive elements."*

To illustrate with a simple example, an initial shape may be a simple line segment, and a shape rule may allow for successive shapes to be generated by adding line segments of varying lengths at right angles to the ends of any prior line segment. Or, an initial shape may be a circle, and a shape rule may allow placement of one circle inside another. As shown in figure 3, these elementary shape grammars can easily generate a large variety of shapes, all of which are united in their corresponding "shape families" by virtue of the common grammar that generated them.

Initial shape	Shaping rule	Sample elements from shape family
—	—├	
○	○⊙	

**Figure 3 Shape grammars**

To see the analogy of shape grammar to spoken languages, think of shape families as sentences within a given shape language, and the rule set R as the grammatical rules that give rise to such sentences. The particular set of rules found in any rule set R are akin to the particular principles and parameters underlying any given E-language. We may then think of these examples as being grammatically correct within the context of the language system that produces them.

Andrew Li (2001) has successfully applied this concept for replicating certain elements of the architectural style of the *Yingzao fashi*, a classical architectural text from eleventh-century China. Fractals, too, may be thought of as shape families generated through repetitive re-application of a given set of shape rules. As we shall see below, Beijing's hutongs also share certain fractal-like qualities suggesting a distinctive shape family.

### 2.3.2 Habitus

Pierre Bourdieu (1977, 2002) defines habitus as an enduring system of *dispositions*, which we may interpret as social practices and the communal systems of meaning that are inextricably associated with them. Habitus includes spatial practices as well, which Bourdieu (1977, 89) illustrates nicely with an example from Kabylia (Algeria), but which is equally apt in the context of “four-wall garden” housing in Beijing:

*“... inhabited space – and above all the house – is the principal locus for the objectification of the generative schemes; and, through the intermediary of the divisions and hierarchies it sets up between things, persons, and practices, this tangible classifying system continuously inculcates and reinforces the taxonomic principles underlying all the arbitrary provisions of this culture.” (Bourdieu, 1977, 89)*

The spatial aspect of habitus is nicely articulated by Casey (2001, 686) who avers that “habitus is a middle term between place and self – and, in particular, between lived



place and the geographical self". I find it useful to think of habitus as the intersection between identity and space. Or, put another way, habitus is what makes a house a home. Bourdieu also draws explicitly on Chomskian notions of the generative principles behind social / spatial / linguistic practices, with an important distinction:

*"As a dynamic system of dispositions that interact with one another, it has, as such, a generative capacity; it is a structured principle of invention, similar to a generative grammar able to produce an infinite number of new sentences according to determinate patterns and within determinate limits. The habitus is a generative grammar but it is not an inborn generative grammar in Chomsky's tradition ..."* (Bourdieu, 2002, 46)

#### **2.4 Constructing spatial sentences**

Before turning to the Beijing case study, it is useful to reflect again on the first premise: that material urban form constitutes part of a broader system of language. If this is so, would it not be possible also to construct meaningful "spatial sentences" with this language? Before attempting to do so, I first draw once more on Chomsky for some backup. Regarding the controversial concept of semantic primitives, Chomsky (1978, p.141) says:

*"It may be reasonable to suppose that at least traditional notions like 'agent of action', 'instrument', 'goal', 'source', and so on, are part of universal semantics; then such notions would be available for semantic representation."*

Perhaps Bierwisch's (1999) notion of I-space, introduced above, also relies on deep-rooted semantic primitives pertaining to spatial concepts and relationships. In any event, if Chomsky is correct in his supposition, then semantic primitives ought to be expressible across all languages, even spatial ones. Here I introduce three simple spatial sentences, one inspired by a traditional Japanese garden in Kyoto, one inspired by the Tokyo Metropolitan Government building in Shinjuku, and a third based on the common traffic circle.

Figure 4 presents a stylized representation of a Zen garden on a hilltop near Kyoto. The outstanding design feature of the garden is based on the concept of *shakkei*,<sup>63</sup> or "borrowed view". The garden's viewing platform features one wall open and three walls (not depicted in figure 4) closed so that both the subject, or "agent of action" in Chomsky's quote, and the implied action are very clearly identified. As one sits on the tatami mats facing the open garden, one's eyes are immediately drawn to a mountain that is on the opposite side of a deep valley. It is the view of this mountain that is "borrowed" and incorporated into the design of the garden, as though it had been placed just so for this very purpose. This mountain is clearly the object of the sentence, and the implied viewing action is a transitive verb that links the subject to the object. The object is a noun, and it is adorned beautifully by plants and shrubbery that serve as adjectives modifying this borrowed noun. Finally, the act of viewing is itself modified by the meticulously landscaped surface that, acting as an adverb, directs one's gaze.

---

<sup>63</sup> My thanks to Jonathan Reynolds for helping me recover the proper term in Japanese.

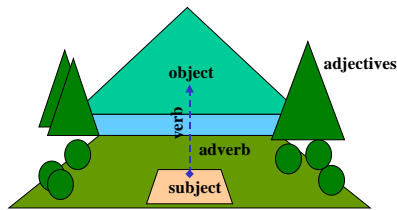
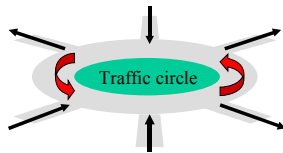
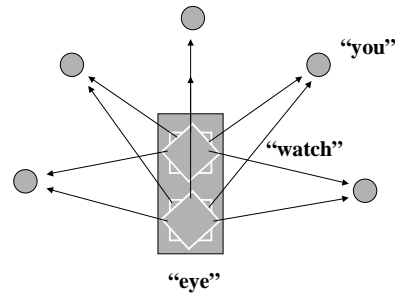


Figure 4 “Borrowed view”  
Figure 5 “Eyeful towers”



“we must cooperate here”

Figure 6 Junctions as conjunctions (or injunctions)

Japan is also the source of inspiration for the spatial sentence represented in figure 5. The Tokyo Metropolitan Government building designed by Keizo Tange dominates the surrounding landscape in Shinjuku. Supported by a massive base, each of its two towers has a peculiar construction by which -- if viewed from above as depicted in figure 5 -- one square is set at a 45° angle within a first square. Thus, there are eight faces to each tower. The effect of this design is that one cannot escape the sensation of being "watched" by this structure as one moves about Shinjuku. The impression is magnified by the knowledge that this is the seat of power for the Tokyo Metropolitan Government. Here, then, is a spatial sentence that is laden with contextual semantics as well.

My final example is that of the ubiquitous traffic circle, depicted in figure 6. Again, I would argue, the implied agent of action is very clearly defined as "we", all who enter. Our relationship to one another is highly symmetrical, and the functional purpose for our coming together momentarily is also clearly indicated by design. The traffic circle is a junction serving both as conjunction and injunction; joining us as it enjoins us.

## 2.5 Revisiting the first premise

While by no means conclusive -- I am not prepared to assert that the first premise has been "proved" -- the review thus far certainly does lend credence to and support for the view that urban form has a latent linguistic property to it, and that there is potential for formalizing the underlying grammar that allows meaning to be shaped, both literally and figuratively (which in this case are very much the same thing) from the spatial settings that contain us. This support comes very directly from urban semiology and related exhortations to read the city as a text. It comes, too, from architectural design perspectives that grapple directly with the conscious and explicit

use of shapes and forms to convey meaning. From the linguistics literature, the first premise is supported by a Chomskian view of grammar as a transformation from innate internal representations of language to external representations that are encumbered by particular forms. Thus, while by no means conclusive, there is sufficient cause to continue the investigation through the device of a specific case study.

### 3. Second premise: From *putonghua* to *hutonghua*

#### 3.1 Semantic progression

The old city of Beijing is characterized by a bewildering yet intimate labyrinth of a myriad *hutong* (alleyways) woven through traditional *siheyuan* (courtyard style) housing. As suggested in the photos in figures 7 and 8, this traditional configuration defines "us" and "them" with progressive levels of intimacy as one penetrates narrower alleyways and inner courtyards.

The design of these spaces displays a semantic progression that bears amazing likeness to a similar progression found in the Chinese written language. To illustrate, figure 9 shows successive iterations of written characters that are then combined to form the character *lei*, meaning "tired". One sees that this is the culmination of a simple yet exquisite semantic progression by which the implied efforts of "toiling in fields" or "spinning silk" are combined into one meaningful bundle of brush strokes (McNaughton, 1979). This is characteristic of the Chinese written language. A similar mindset is evident through the design of courtyard housing, with complex expressions of form being assembled progressively from simple components, as in figure 10. Moreover, as pointed out by Wu (1999), the traditional courtyard structure has a self-replicating fractal-like quality that results in an interlocking form of enclosures and delimiters from the smallest scale (individual rooms) to the largest scale (the city). The graphic in figure 11 portrays the courtyard-like quality of the old city of Beijing beautifully.



Figure 7 Hutong alleyway (photo by author)



Figure 8 Courtyard housing (photo by author)

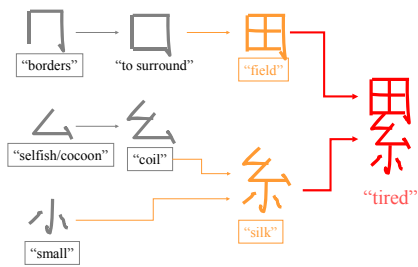


Figure 9 Semantic progression in written language

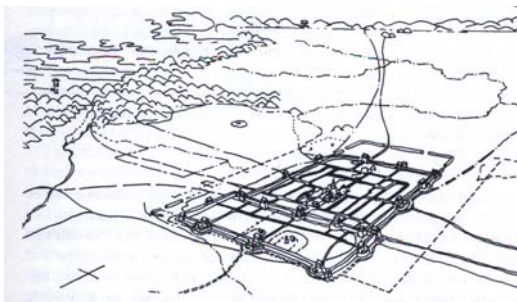


Figure 11 Courtyard form of Old Beijing (Wu, 1999)

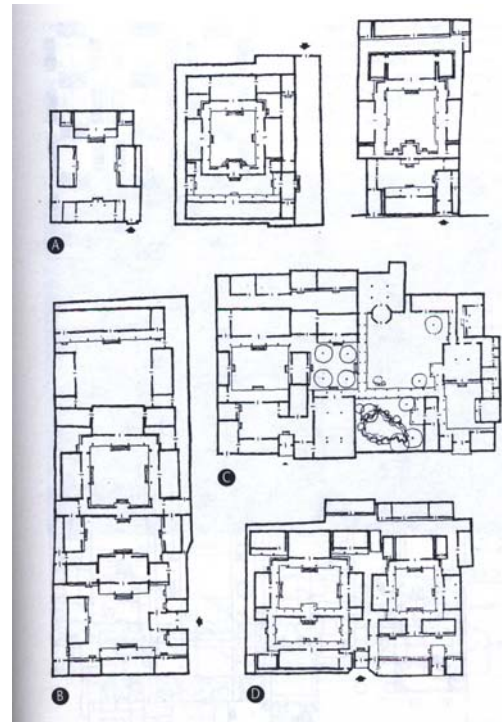


Figure 10 Semantic progression in courtyard housing (Wu, 1999)

### 3.2 The Idea of North

If the hutong urban form is indeed part of a more broadly construed language system, what is being expressed through its utterance? I shall say more about this as we proceed to the third premise, regarding translation, but for the time being we may consider it to be an expression of a cultural mindset. It is also the expression of a concept, one that we may term the *Idea of North*.

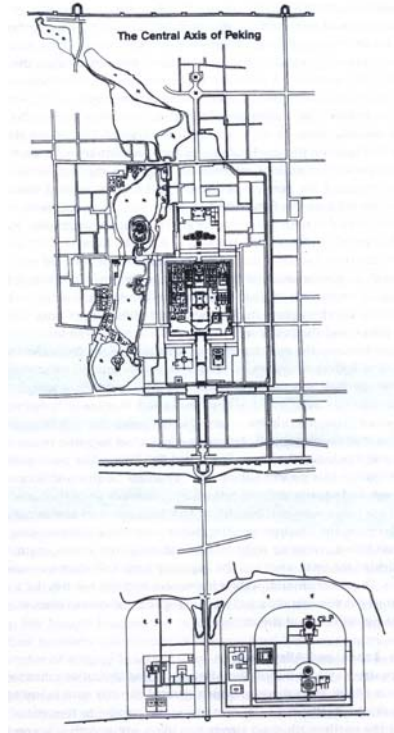


Figure 12 Beijing's central north-south axis

The *Idea of North* is intrinsic to Beijing's character, and this is most evident, of course, in its very name, meaning "northern (*bei*) capital (*jing*)". Moreover, a strong north-south axis dominates Old Beijing's layout. Professor Wu Liangyong describes it as "the most magnificent urban axis of the premodern world" (see figure 12). The north-south axis obliged visitors to approach the Emperor's magnificence from the south, with the adjacent halls, gateways, and other structures providing a sense of rhythm and climax as one approached (Wu, 1999). Ancient Chinese associated the Emperor himself with the northern pole star, noting that all the other stars revolved around its celestial majesty (Sit, 1995).

The renowned Canadian pianist Glenn Gould has composed a penetrating study of the *Idea of North*, producing a "contrapuntal radio" series with that title for the Canadian Broadcasting Corporation.

As perhaps the 20<sup>th</sup> century's leading expositor of the keyboard music of Johanne Sebastian Bach, Glenn Gould had a deep fascination for contrapuntal structures that allowed several voices to speak simultaneously, each with its own distinctive contribution to a transcendental whole. In the *Idea of North*, he sets four human voices in motion simultaneously, as the narrators enunciate with their distinctive Canadian twangs their own individual thoughts about the *Idea of North* (as minutely scripted by Gould, of course). The result was a contrapuntal sound composition ... "a poetic and beautiful montage of the North" (Friedrich, 1990). The vocal narratives in Gould's work are "trajectories" in the sense of de Certeau (1984). From this light, Beijing is the grandest composition of all, with ten million trajectories, each one articulating its own *Idea of North*.

### 3.3 Revisiting the second premise

If indeed urban form constitutes part of a broad language form, as suggested by the first premise, then the hutong form certainly appears to be a language construct that is well tailored to Beijing. The underlying design motif bears strong similarity to that of written Chinese, marked by a regular semantic progression of basic shapes combined with increasing complexity to produce a rich array of meaningful configurations. This is surely a shape grammar in the sense articulated by Stiny (1980), and Beijing's hutong neighborhoods comprise a wonderfully nuanced and textured shape family. This tentative finding invites more focused research to assess whether there is indeed a deep linkage between hutong architectural structures, Chinese written and spoken language, and other deeply rooted forms of cultural expression. It suggests the possibility of a *habitus* (in Bourdieu's sense of enduring dispositions) centered on this broad communicative system. To recapitulate, up to this point we have reviewed abundant and diverse evidence linking urban form to language more generally (first premise), and we have noted striking similarities linking the hutong urban form with the written language form in Beijing (second premise). Although these findings must remain tentative at this initial stage of inquiry they do invite us to push ahead with the third premise.

#### 4. Third premise: Lost in translation?

##### 4.1 New Beijing

The pace of Beijing's transformation is truly astonishing. Traditional hutong neighborhoods are disappearing with relentless speed, and the remaining neighborhoods are increasingly isolated and seemingly out of place. The photograph in figure 13 is eerily reminiscent of Wu Liangyong's (1999) haunting description of the manner in which redevelopment occurs -- "a few highrise buildings loom chaotically over a jumble of old one-storey houses, reminding them, as it were, of their doom".



Figure 13 Looming modernity



Figure 14 Olympic modernity

The three signboards in figure 14 epitomize the new Beijing: one advertises the modern "international" residential apartment units appearing in the background; another sign presents a modern woman in sexy attire; and the third announces the forthcoming Beijing Olympics of 2008. Indeed, if there is a new ideology ruling in

China today, it is "2-0-0-8" and beyond, as preparations for new China's formal debut on the international stage sit squarely at the center of the nation's political agenda. The games are emblematic of a larger agenda to restore China's international prestige and to further legitimize the Party's leadership through continued economic development and societal transformation. At an urban level in Beijing, this agenda clearly calls for a rapid and wholesale replacement of the old, dirty, smelly, decrepit, overcrowded hutong neighborhoods with new, clean, sanitized, modern, spacious apartment blocks. Who could disagree? The issue explored here is whether something essential might thereby be lost in translation. For that we must revisit some linguistic concepts.

#### 4.2 Models of translation

Figure 15 presents a model of the translation process, adapted from Roger T. Bell's (1991) text on translation theory and practice. The process, of course, does not entail a direct mapping from the source language text to a target language text. Instead, the source language text is first deconstructed through syntactic, semantic and pragmatic analyses in order to arrive at a semantic representation, depicted by Professor Bell (and again in figure 15) as a nebulous quality that captures the essential meaning of the expression in the source language text. A reverse process, a reconstruction if one pleases, is then applied to produce a syntactic, semantic and pragmatic synthesis, the end result of which is a translated text in the target language.

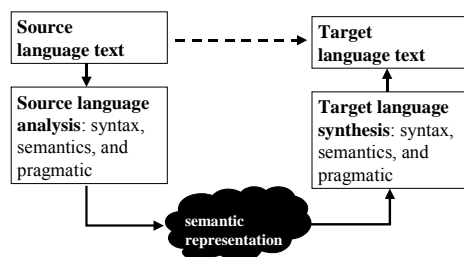


Figure 15 Bell's model of translation

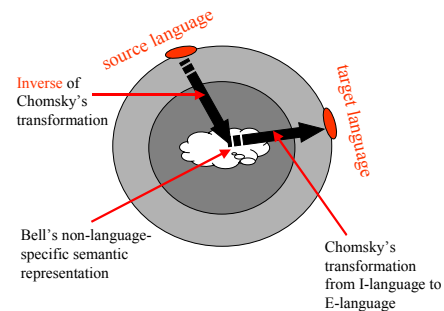


Figure 16 A hybrid model of translation

Bell refers specifically to a "non-language-specific" semantic representation of what is being said, and this nebulous formation lies at the fulcrum of his model of translation. This bears a strong parallel to our earlier representation of Chomsky's model of language, and this motivates the simple hybrid model I present in figure 16, where translation from one E-language structure to another is mediated through I-language structure. By superimposing these two models, Chomsky's I-language and Bell's non-(surface) language-specific semantic representation coincide. Likewise, Chomsky's transformation from I-language to E-language coincides with Bell's reconstruction or synthesis; and the inverse transformation (from E-language to I-language) coincides with Bell's deconstruction or analysis. This hybrid model can be used to represent the process by which Beijing's original urban hutong text(ure) is being translated into *modern-speak*.

#### 4.3 What is lost in translation?

The question is unavoidable; according to Eco (2000):

*"Because one of the problems of semiotics is to say whether and how we use signs to refer to something ... [it cannot] avoid another problem: What is that something that induces us to produce signs?"*

According to Eco, that something is *being*. In our case, we may combine Eco's response with Gould's, and so conclude that it is the *fundamental idea of be(ij)ing*<sup>64</sup>, as originally expressed through hutong forms, that is being lost in translation. This fundamental idea lies beyond language, but is expressed through this language, broadly conceived. Modernistic forms are ill suited to expressing this fundamental idea of be(ij)ing; it is as though the poetry of daily life were being translated into machine language.

Salingaros (2000) defines the problem of modernistic forms in the context of traditional settings neatly with reference to figure 17. Traditional architectural patterns combine with corresponding social patterns to form higher order patterns, as depicted on the left. Modernistic architecture is not so much another pattern form as it is an anti-pattern, whose function is essentially disruptive, according to Salingaros. In his view, modernistic forms operate essentially as viruses:

*" ... In the desire to be totally innovative, established disciplines sometimes willingly replace their pattern languages by stylistic rules. These are entirely arbitrary, however, coming either from fashion or dogma ... The mechanism by which stylistic rules propagate bears essential similarities to the replication of [computer] viruses. [The success of a] stylistic rule is measured not by how well it serves any human activity, but rather by how many copies are produced."*

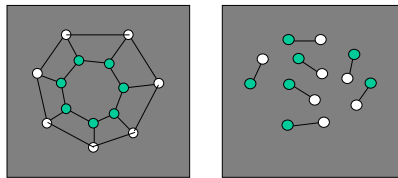


Figure 17 Patterns and anti-patterns  
(Salingaros, 2000)

In sum, hutongs may be seen to express something essential about the identity of Beijing. It is a collective inner language that maps to the cultural mindset of a place.<sup>65</sup>

This places the *hutonghua* dilemma squarely in the broader context of Chinese modernity. Writers throughout the past century have struggled with this issue intensely, seeking to reconcile traditional norms with modern imperatives. No city has felt this pressure more acutely than Shanghai, and Leo Ou-Fan Lee's (1999) *Shanghai Modern* recounts this literature nicely, as do some of the photographs he provides of early modernizing Shanghai (see figure 18).

<sup>64</sup> I am partial to Basil Fawlty's (played by John Cleese) pronouncement on the BBC comedy series *Fawlty Towers*: "It has a certain *je ne sais quoi* ... but I don't know what it is".

<sup>65</sup> Chomsky would no doubt object strenuously to any suggestion of a "collective inner language". For him, all language resides in individuals, and so it makes no sense to speak about the social construction of language. In this sense my use of collective language as a fundamental social institution is more consistent with that of Searle (2005). Indeed, Searle argues that any social institution pre-supposes a linguistic capability.





**Figure 18 Shanghai modern, circa 1930  
(Lee, 1999)**

#### **4.4 Counter-arguments**

It is useful to take stock of the argument thus far by reviewing some cogent counter-arguments. Recall that for de Certeau (1984), it is the use of a language rather than its grammatical form that constitutes the matter of culture. As he puts it, "the act of speaking (with all the enunciative strategies that implies) is not reducible to a knowledge of the language". More generally, we should not under-estimate human ingenuity, nor over-estimate the deterministic qualities of over-arching (linguistical) systems. Indeed, this is a classic example of the fundamental tension between *structure and agency*. Likewise, contemporary studies of overseas Chinese suggest that "Chineseness" is as robust and multifaceted as it is elusive. Yeh Wen-Hsin (2000), in *Becoming Chinese: Passages to Modernity and Beyond*, speaks of a "culturally defined Chinese universe with negotiated boundaries, in which the attributes of 'Chineseness' are not culturally predetermined and immutable, but are the products of an ongoing historical process.

One pitfall of scholars, especially those from the West, is to assume that planning principles derived in the West are automatically appropriate to China or other Confucian contexts (Heikkila, 1994). A different yet related pitfall is to admonish Chinese to forego the perks of modernization in order to retain the quaintness of traditional practices. Such a patronizing message is essentially one of cultural imperialism in the sense articulated with such devastating effectiveness by Edward Said (1979).

The language paradigm is useful for evaluating these counter-arguments. Certainly one would not argue that any language should or could remain static. It will surely evolve in response to all manner of internal and external stimuli. However, this does not mean that all possible evolutionary paths are equally valid. Here again Stiny's (1980) concept of shape families is helpful. Shape families are infinite in their potential variety, but that does not mean that all shapes are included. Only those shapes that are derived from transformations that are consistent with the underlying shape grammar are validated. Thus, the challenge is to extend the traditional shape grammar to encompass a modern vocabulary. This brings us to *Ju'er Hutong*.

#### 4.5 *Ju'er Hutong*

Figure 19 shows a plan (figure 6.45 from Wu, 1999) for renewal of 8.2-hectares of land along *Ju'er Hutong* in old Beijing. Professors Wu Liangyong, Mao Qizhe, and others at Qinghua University have led this effort to demonstrate how Beijing's hutong neighborhoods can be redeveloped according to a process of "organic renewal ... reflecting modern spirit, traditional culture, and local characteristics"<sup>66</sup>.

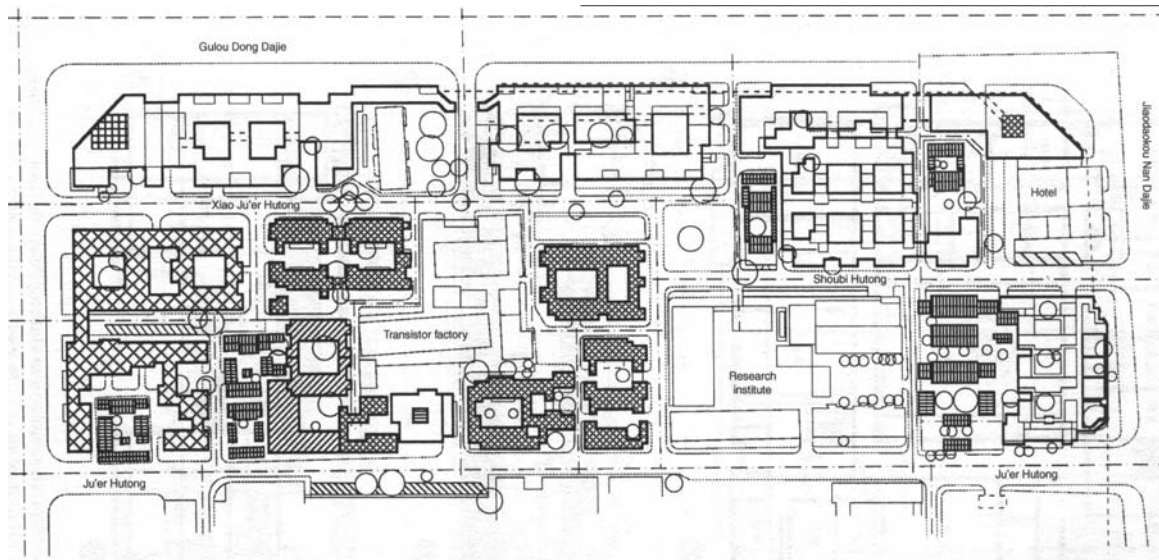


Figure 19 Plan for *Ju'er Hutong* (Wu, 1999)

The *Ju'er Hutong* project is a significant prototype of how a shape family can be extended to encompass a new vocabulary. Professor Wu and his colleagues are helping to translate traditional design concepts into a modern setting, thereby creating hutong-style neighborhoods with modern plumbing and facilities. The *Ju'er Hutong* project has been awarded both national and international critical acclaim, and Professor Wu deservedly received a *World Habitat Award* in 1993 for his work. Notwithstanding this critical acclaim, the project, by his own admission, has been a mixed success, as traditional design concepts are adapted in response to rapidly changing contemporary socio-economic realities and expectations in Beijing. Part of the problem he encountered is that the backdrop of urban change writ large in Beijing was not fully compatible with his neighborhood scale project. The challenge faced by Professor Wu and his colleagues is essentially one of translation, and to be addressed successfully requires fluency in both source and target languages. It is difficult to imagine someone with greater mastery than Professor Wu in this regard. If he and his colleagues fall short, there is a very real danger that an essential aspect of Beijing will soon be lost in translation.

#### 4.6 Revisiting the third premise

Much has been written about the loss of precious traditional urban settings in the face of modernization, both in China and elsewhere. What is new here is the articulation of an explicit model of linguistics to provide a theoretical framework for our chosen case study. It is reasonable to ask, then, what if anything has been gained through reference to this framework. In the absence of a linguistic model, one is left with

<sup>66</sup> The latter part of this quote is from the 1983 revision to the Beijing Master Plan, as quoted in Wu (1999, p.43).

merely the replacement of one surface structure (in the old Chomskian sense) by another. While one may bemoan the implied loss, it is only with a linguistic model that one can explicitly posit that something important is being said in the source language. From this perspective, questions of translatability follow immediately, naturally, and inevitably.

A most pressing need, therefore, is to undertake additional work that extends the domain of linguistics to encompass the language of spatial forms. Much of the work reviewed here on urban semiology, pattern language, and the rhetoric of daily life certainly points in this direction but often falls short of a formal linguistic paradigm. This paper argues that what is required is more than the use of language as an analogy: what is required is an extension of our concept of language itself.

## 5. Acknowledgements

For helpful, encouraging, and insightful comments on an earlier version of this presentation, the author is grateful to Wu Liangyong, Mao Qizhi, Andrew Li, Dan Abramson, Sang-Chuel Choe, Gill Lim, Jeffrey Cody, Yukio Oguri, John Courtney, Meng Xiaochen, Glenn Shive, Craig Canning, Martin Krieger, Tridib Banerjee and others. As author I am solely responsible for its contents.

## 6. References

- Bloggs, J., 1998, A non-kriging prediction algorithm. *Journal of Obscure and Unrepeatable Results*, **63**, 1998-1999.
- Dubious, V., and Suspicious, H., 1986. *Geostatistics: The Armchair Approach* (Southampton: Mustbe-Desperate).
- Nogg, I., and Trustworthy, A., 1843, Reworking previous publications for fun and profit, In *Proceedings of the Second International Conference on Old and Obsolete Statistical Methods* (Southampton: GeoDynamics Society), pp. 12567-12568.
- Abramson, Daniel (1998). *Neighborhood Redevelopment as a Cultural Problem: A Western Perspective on Current Plans for the Old City of Beijing*, Doctoral Dissertation, Qinghua University, Beijing.
- Alexander, Christopher, et al. (1977). *A Pattern Language*, Oxford University Press, Oxford.
- Baker, Mark C. (2001). *The Atoms of Language: The Mind's Hidden Rules of Grammar*, Basic Books, New York.
- Barthes, Roland (1986). The Semiology of the Urban, in M. Gottdiener & A. Lagopoulos, eds., *The City and the Sign: An Introduction to Urban Semiotics*, New York, Columbia University Press.
- Bell, Roger T. (1991). *Translation and Translating: Theory and Practice*, Longman, London and New York.
- Bierwisch, Manfred (1999). How Much Space Gets Into Language?, in Bloom et al, *Language and Space*, MIT Press
- Bloom, Paul, Mary Patterson, Lynn Nadel and Merril Garrett, eds. (1999). *Language and Space*, MIT Press, Cambridge, MA.
- Chomsky, Noam (1979). *Language and Responsibility*, Pantheon Press, New York. Reprinted in *On Language*, New Press, New York, 1998.
- Chomsky, Noam (1995). *The Minimalist Program*, MIT Press, Cambridge, Mass.
- Chomsky, Noam (2000). *The Architecture of Language*, Oxford University Press, Oxford.

- de Certeau, Michel (1984). *The Practice of Everyday Life*, University of California Press, Berkeley.
- Eco, Umberto (2000). *Kant and the Platypus*, Vintage, London.
- Friedrich, Otto (1990). *Glenn Gould: A Life and Variations*, Lester & Orpen Dennys, Toronto.
- Gould, Glenn (1967). *The Idea of North*, Canada Broadcasting Corporation, Toronto.
- Heikkila, Eric J. (2007). Three Questions Regarding Urbanization in China, *Journal of Planning Education and Research*, vol. 27(1), 65 -81.
- Heikkila, Eric J. (1994). Confucian Planning or Planning Confusion?, *Journal of Planning Education and Research*, vol. 14.
- Hillier, Bill and Juliette Hanson (1984). *The Social Logic of Space*, Cambridge University Press, Cambridge.
- Hillier, Bill (2001). *The Common Language of Space*, Space Syntax Laboratory, University College London.  
<http://www.spacesyntax.com/publications/commonlang.html>.
- Kim, Won-Bae, Mike Douglass, Sang-Chuel Choe, and Kong Chong Ho, Editors (1997). *Culture and the City in East Asia*, Clarendon Press, Oxford.
- Lee, Leo Ou-Fan (1999). *Shanghai Modern: The Flowering of a New Urban Culture in China, 1930-1945*, Harvard University Press, Cambridge, Mass.
- Li, Andrew I-Kang (2001). *A shape grammar for teaching the architectural style of the Yingzao fashi*; Doctoral dissertation, Department of Architecture, MIT.
- McNaughton, William (1979). *Reading and Writing Chinese: A Guide to the Chinese Writing System*, Caves Books, Rutland, Vermont.
- Newmeyer, Frederick J. (2005). *Possible and Probable Languages*, Oxford University Press.
- Palmer, F.R. (1981). *Semantics*, 2<sup>nd</sup> edition, Cambridge University Press, Cambridge.
- Said, Edward (1979). *Orientalism*, Vintage, New York.
- Salingaros, Nikos A. (2005). *Principles of Urban Structure*, Techne Press, Amsterdam.
- Salingaros, Nikos A. (2000). The Structure of Pattern Language, *Architectural Review Quarterly*, vol. 4, 149-161.
- Searle, John R. (2005). What is an Institution?, *Journal of Institutional Economics*, vol. 1(1), 1-22.
- Sit, Victor (1995). *Beijing: The Nature and Planning of a Chinese Capital City*, John Wiley & Sons, New York.
- Smith, Neil (2003). *Chomsky: Ideas and Ideals*, 2<sup>nd</sup> edition, Cambridge University Press.
- Stiny, George (1980). Introduction to shape and shape grammars, *Environment and Planning B*, vol. 7, 343-351.
- Wu Liangyong (1999). *Rehabilitating the Old City of Beijing*, University of British Columbia Press, Vancouver.
- Yeh, Wen-Hsin, editor (2000). *Becoming Chinese: Passages to Modernity and Beyond*, University of California Press, Berkeley.
- Zhu, Zixuan and Reginald Yin-Wang Kwok (1997). Beijing: The Expression of National Political Ideology, in Won-Bae Kim et al, editors, *Culture and the City in East Asia*, Clarendon Press, Oxford.

## Comparative Perspectives

## **Changing the Landscape of the City from Mess to Modern: Lessons Learned From Kuala Lumpur**

**Noor Rosly HANIF, Wan Nor Azriyati Wan Abd AZIZ**

*Centre for Studies of Urban and Rural Real Estate (SURE), Faculty of Built Environment, University of Malaya, Kuala Lumpur, Malaysia*

### **Abstract**

The introduction of New Economic Plan during the early post independence period followed by a series of 5-year economic plan has result in healthy urban growth in major cities in Malaysia particularly in the capital city of Kuala Lumpur. The key aim is modest. On the one hand, the poor must be given a fair chance to become part of the home owning democracy. On the other hand, economic balance between different major races must be achieved so as the races will not coincide with the economic sector. One of the home-ownership programme, named as People's Home-ownership Programme (HOPE) launched in 2000's is looked upon as a catalyst to the national aspiration of achieving the target of 'one family one home'. Homeownership for the urban poor is perceived as one the most successful planning by the state in steering the urban growth in Kuala Lumpur. Drawing upon a case study of a redevelopment of a large parcel of illegal settlement in Kuala Lumpur, this study seeks to examine the role of the state in providing the opportunity the urban poor to enter into home ownership. It addresses the role of planning in mapping a new landmark in Kuala Lumpur. Further survey amongst those households in this new landmark area shed some lights on their experience as part of the inhabitants of new landmark area. The study concluded that the role of planning in steering the urban growth has result in not only changing the landscape of the city but most importantly, it provides better opportunity for the disadvantage group to enter home ownership.

**Keywords:** Urban growth, economic plan, planning, home ownership

## Using Negotiation to Steer Urban Growth: Lessons Learned from Malaysia

Wan Nor Azriyati Wan Abd AZIZ, Noor Rosly HANIF

*Center of Excellence of Studies of Urban and Regional Real Estate, Faculty of Built Environment, University of Malaya, Kuala Lumpur, Malaysia.*

### Abstract

The world of town planning is one of constant activity that explicitly or implicitly practices negotiation. Planners negotiate city plans amidst interplay of agencies, stakeholders and neighbouring jurisdictions, policies with other government agencies, permits and site plans. In each of the above contexts, the planner walks a tightrope between the often ambiguous directives of his or her agency and the conflicting interests and pressures of adversaries, intervenors, and interested public. Negotiation, as an idea, is unique, and culturally specific. Negotiations occur in a wide variety of political, economic, and social settings. Against this background, history showed that the process of negotiations is embedded within the cultural characteristics and governance traditions of Malaysia. Since planning approval is part of the land development process, it is significant to examine and evaluate the way local authorities (who are also the local planning authorities) in Malaysia, practice negotiation at this stage. The main aim is to consider the extent to which negotiation plays a significant role in steering urban growth. Drawing upon an instrumental case study with selected Planning Directors of five local authorities in three different locales in Malaysia, this study seeks to demonstrate that negotiation facilitates an acceleration of planning approval. The empirical case study produced evidences that negotiations are held to be an acceptable practice that forms an essential part of the planning process in Malaysia. Negotiations occur early at the pre-application stage and continue throughout the planning process. The study also showed that in the context of planning practice in Malaysia, negotiations are conducted vigilantly so as to achieve the local authority's objective in land development process. The study concludes that the role of negotiation will continuously plays an important position in the planning practice in steering urban growth in Malaysia.

**Keywords:** Negotiation, planning approval, planning process, land development process.

# The Sustainable Development of Urban Green Open Space Policy and Urban Form: A Comparative Study of Hefei and Tainan City

Kang-Li WU, Kang-Cheng LIU

*Department of Urban Planning, National Cheng-Kung University, Tainan, Taiwan*

## Abstract

The development of urban form has long been of interest to researchers in fields of urban planning and urban geography. The influence of green open space policy on urban form, in particular, has become an increasingly important issue affecting urban land development. However, relatively few studies have explicitly addressed the relationship between urban green open space policy and urban form from the viewpoint of sustainable urban land management. Moreover, lessons of the development of urban form and green open space policy of Chinese fast-growing cities are seldom compared in previous literature. Therefore, conducting a systematic comparative study that examines the relationship between green open space policy and the development of urban form selected fast-growing Chinese cities has become an important and urgent research issue.

Employing the concept of land development management and sustainable development, this paper attempts to address this issue. Employing the two selected renowned eco-cities—the Hefei (合肥) in Anhui and Tainan (台南) in Taiwan as empirical cases for a comparative study, this investigation aims at exploring three research questions: (1) What are the relationship between green open space policy and the development of urban form in Chinese fast-growing cities; (2) What lessons and issues regarding sustainable urban form and green open space management of the two cities can be addressed and compared; (3) How should we develop suitable urban planning strategies to promote sustainable urban land development through the lessons learned from the comparative study. Employing research methods that include spatial mapping, field surveys, content analysis, and interviews, this study will provide an in-depth investigation of these research questions. Through our comparative study of the two selected eco-cities, this study will suggest planning strategies to promote the sustainable development of urban form and urban green open space.

**Keywords:** Urban Form, Urban Patterns, Green Open Space, Land Development, Sustainable Urban Development