

China's Peri-urbanization :

Land Development Markets under Institutional Uncertainty

Jieming Zhu

목 차

1. Introduction
2. Uncertainty, institution and governance
3. Rapid urbanization amid gradualist reforms
4. Institutional uncertainty in the emerging land development market
5. Disordered land development as a result of institutional uncertainty
6. Conclusion

Abstract

China's economic reforms, institutional change in the context of gradualism has stimulated economic growth without serious social instability, but it has brought about institutional uncertainty as well. Ambiguous and incomplete land rights in the domain of rural collectives compromise the public governance over rapid urbanization. Ambiguous and incomplete land rights induce hasty and disordered capitalization of land rents, and generate uncontrolled negative externalities that deteriorate the urbanizing environment. While the effective state governance over rapid peri-urbanization is absent, private governance arises spontaneously in the form of super-scale gated residential estates with well-defined property rights over the confined residential area. Though it has met the aspiration of a rising middle-income class for a decent living environment, social segregation and urban sprawl emerge and become serious challenges to society. Public governance over rapid urbanization

has to be strengthened in order to achieve social and environmental sustainability.

Key words

institutional uncertainty; land rights; rapid urbanization; governance

1. Introduction

China's economic reforms, aiming at enhancing economic productivity and social mobility, have brought about tremendous changes to the country, and its cities have been undergoing rapid social, economic and physical transformations. In the course of the reforms, decentralization of economic management sets off an unprecedented change which gradually replaces central directives with material incentives to the agents at local level. The state is transforming itself from a producer and socialist welfare provider to an advocate for marketization. The socialist authoritarian government is changing from an ideologue preoccupied with political correctness to a state keenly pursuing economic growth, with the progressive reforms that are gradually phasing out unsustainable socialist welfarism and letting the market take over the role of provision.

The transition from central planning to market orientation is the key factor underpinning the change. Opening up to the world economy and turning to market-mediated production and consumption have fundamentally changed the way how economy and society are managed. Albeit dramatic changes, gradualism is the cornerstone of the unprecedented reform. Institutional change in the context of dualism (co-existence of central planning and marketization) leads to institutional uncertainty. Uncertainty either induces disorderly short-term behavior or prompts invention of new institutions in order to manage disorder ensued from uncertainty. This paper aims to explore how institutional uncertainty impacts

on the formation of built environment.

Within the conceptual framework of governance under which institutions either curb or induce uncertainty, the paper firstly elaborates on the institutional uncertainty in the China's emerging land development market. Rapid urbanization is changing the landscape of economically dynamic regions amid gradualist reforms. Institutional uncertainty arises, represented by the ambiguous and incomplete land rights over agricultural land collectively-owned by the rural communities. Collective-ownership of rural land is complicated by its unique land rights structure where owners only possess use rights, while possession of other rights is not unambiguously stated. The absence of a regulatory state (regulator) is evident as China's local governments have become the local developmental state (player). Thus, institutional uncertainty in the absence of the third-party's regulatory governance induces disordered peri-urban land development, resulting in deterioration of the built environment.

The case of Dashi Township in Guangzhou's peri-urban Panyu demonstrates the above-mentioned process and phenomena. Deficient public governance and its consequential physical deterioration prompt spontaneous private governance in the form of super-scale gated housing estates in the suburbs in order to escape from uncontrolled externalities in the peri-urban areas. Nevertheless, the social divide between the worsening low-income villages and the enclaves of middle-class housing estates exacerbate social inequality, and urban sprawl caused by suburbanization does harm to environmental sustainability. Therefore, the significance of this paper lies in the understanding that effective governance should be based upon well-defined property rights over land resources, and scarcity of land resources (measured by the population density) accentuates the importance of collective action.

2. Uncertainty, institution and governance

Uncertainty prevails in the real world, because of complexity of human relationships and lack of knowledge of the human world. Knowledge and uncertainty are mutually exclusive (Shackle, 1961). As human beings have gained much control over the physical world, uncertainty derived from human interactions has increased tremendously, resulting from the gap between human competence and difficulties in the real world (Heiner, 1983). Scarcity also complicates problems in human relationships (Commons, 1934), though neo-classical economists believe that scarce resources should be used efficiently if market forces are unshackled so as to drive the market towards a long-term equilibrium of demand and supply. When uncertainty occurs, it prevents individuals from making rational and most appropriate decisions because of not knowing the causality. Following patterns and thus rigidity and inflexibility of behaviour are a way to cope with the capricious real world. “[T]he flexibility of behavior to react... is constrained to smaller behavioral repertoires that can be reliably administered” (Heiner, 1983, p.585).

Order is therefore created by regular and predictable patterns of behaviour and cooperation between community members (Elster, 1989). Formation of rules thus aims to reduce complexity and uncertainty caused by actors’ limited ability to gather information, and to lower transaction costs as well (Williamson, 1985). Transaction costs refer to the effort, time and expense necessary to obtain sufficient information to make, negotiate and enforce an exchange. Transactions are not costless owing to costly acquired knowledge. Hayek (1973) distinguishes between two types of order: organisations and spontaneous order. The former are formed consciously by human design, and the latter is shaped through an evolutionary process of social selection. Alternatively, order can be regarded as institutions which are considered as “the rules of the game”, structuring and binding social interactions and market transactions. North (1991) suggests that institutions should be composed of both informal

constraints such as sanctions, taboos, customs, traditions, and codes of conduct, and formal rules like constitutions, regulations and laws. Therefore, institutions, either formal or informal, are generated in the context of pervasive uncertainty in human interactions, and institutions “reduce uncertainty by providing a structure to everyday life” (North, 1990, p.3). Institutions are fundamental to mitigating uncertainty as social norms make human behaviour more predictable by bounding individuals and providing regularity (Cornell and Kalt, 1997).

Institutions are evolving constantly driven by socioeconomic and technological changes. In North’s (1990) and Eggertsson’s (1994) views, institutional change is made marginal, incremental and path-dependent by an immense stock of social capital in the form of an institutional matrix. Change of institutions is related to social choices, and choices are constrained by cultural norms. Socially deeply embedded institutions of the status quo, both formal that are sanctioned, maintained and enforced by the state, and informal that are controlled by the community and social network, will not be terminated immediately. Those strong institutions determine the path of change, and are often themselves transformed, along with the change, into a new strain with much bearing on the past. The interests of the status quo should play a significant role in maintaining order and thus certainty in an evolutionary process of institutional change. A vacuum will be created when the institutions of the status quo are weakened and new institutions are yet to be established, and thus institutional change can generate uncertainty.

Institutional uncertainty during the China’s economic reforms and social transformation since 1978 has been well pronounced. Gradualism for the socioeconomic change has been chosen because of political constraints, which brings in an approach of trial and error in the implementation of new initiatives. Without a clear chart to guide the change, gradualism leads to dualism which means a co-existence of new and old institutions. Institutional uncertainty during the

institutional change is characterized by a vacuum of governance between the two systems while old institutions are phasing out and new institutions phasing in. A lack of rules and institutions results in the absence of a predictable and transparent environment which is essential for social and economic activities (World Bank, 1992).

In the sphere of China's urbanization and related land development, emerging market forces are at work, but new institutions managing land development are not fully established yet. Arising from the absence of formal governance, uncertainty can induce disorderly short-term behaviour and thus chaos. Uncertainty can also prompt invention of informal governance to manage the disorder. When formal governance is weak in maintaining order and managing interactions, informal governance may emerge. Examples are schemes such as farming cooperative and insurance that were invented to spread risks in face of uncertainty (Schotter, 1981). When the public governance over land development is not adequate due to institutional uncertainty, it gives room for the invention of private governance to overcome uncertainty and disorder.

3. Rapid urbanization amid gradualist reforms

The transition from the centrally controlled system to a socialist market economy and from the closed socialist autarchy to an open economy with market orientation since 1978 has resulted in significant restructuring of the economy and dramatic transforming of social relations. The reform has been changing the economic system from planning coordination to market competition. New institutions are devised to initiate and manage the economy mediated by the market where players compete by prices and act upon incentives. In spite of fundamental changes, gradualism, duo to political constraints, remains the key characteristic of the China's economic reform

which has been implemented for 30 years. Determined by the spirit of gradualism, dualism prevails in order to provide a mechanism that introduces new market elements while retains certain existing planning controls for the sake of social stability (Zhu, 2005).

Due to the ideology of socialist industrialization, urbanization was suppressed during the centrally-controlled period 1949 - 1978 (Ma, 1976). Urban residents only accounted for 19.4 percent of the total population in 1980, rising from 12.5 percent in 1950. Urbanization has gone rapidly since 1978, driven by the marketization and pent-up demand from industrialization. In a span of 28 years (1980 - 2008), 415 million people were urbanized (see Table 1). An equally significant amount of rural land (21,984 sq km) was converted to urban uses during the period 1981 - 2008. Cities have been expanding drastically; especially those in the coastal region which saw 9,827 sq km land newly urbanized during 1991 - 2008, representing about two-thirds of the national total in the same period (see Table 2).

Table 1: Urbanization: increase of urban population

Year	1950	1980	2008
Urbanization level (urban pop. as % of total)	12.5	19.4	45.7
Net increase of urban population (million)			
1950 - 1980	93.4		
1980 - 2008	415.3		

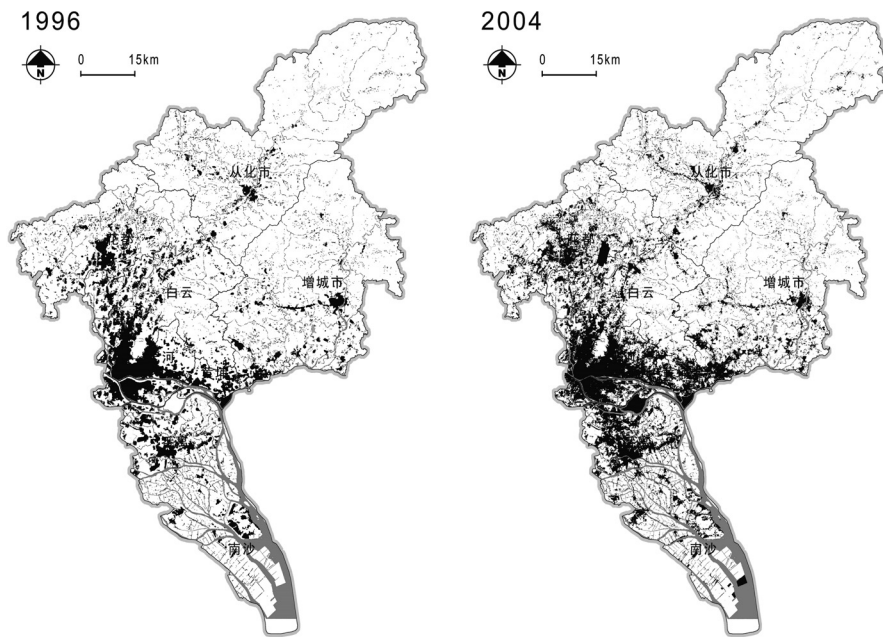
Sources: NBSC, 1999a; Shen, 2005; NBSC, 2009

Table 2: Urbanization: increase of urban land in regions

Year	1981	1991		2001		2008	
	sq km	sq km	%	sq km	%	sq km	%
Mainland China	7,438.0	14,011.1	100.0	24,026.6	100.0	29,422.0	100.0
East Region	-	6,200.4	44.3	11,987.0	49.9	16,027.0	54.5
Central Region	-	5,666.7	40.4	8,244.8	34.3	8,796.0	29.9
West Region	-	2,143.0	15.3	3,794.8	15.8	4,599.0	15.6

Sources: NBSC, 1982b; 1992b; 2002b; 2009b

Driven by the two engines of industrialization and market-oriented land development, rapid urbanization has significantly transformed the Pearl River Delta region towards one of the most dynamic in the world. With a total land area of 41,684.9km², it saw its total urban area increased by 2.6 times during 1990 – 2002, growing from 1066.9km²(1990) to 3862.7km² (2002). The urban built-up area as a percentage of the total land area rose from 2.6% (1990) to 9.3% (2002) in a decade (Guangdong Bureau of Statistics, 2003). Guangzhou, the capital city of Guangdong Province, had its urban built-up area increased from 979.9km² (1996) to 1324.4km² (2004). The urban built-up area as a proportion of the total territory of the municipality (7434.4km²) reached 17.8% in 2004 (see Figure 1, Guangzhou Bureau of Statistics, 2005). Guangzhou's population rose from 5.0 million to 10.0 million during the period 1980 – 2007. In 2007, the population density stood as high as at 15,000 residents per square kilometer in its central area (279.6km²), consisting of four districts of Liwan, Yuexiu, Haizhu and Tianhe (Guangzhou Bureau of Statistics, 2008).



Note: The shaded areas are the urban built-up areas.

Figure 1: Urban built-up areas in Guangzhou Metropolitan Region, 1996 and 2004

Rapid urbanization in the context of high population density makes land development during urban growth highly intense and competitive. Dashi Township in Panyu District, Guangzhou, is the case in illustration (see Figure 2). Located to the immediate south of Guangzhou centralcity, Panyu used to be a rural county and has become an urban district annexed to the Guangzhou metropolis only since 2000. In spite of Panyu becoming an urban district, many of its population remain engaged in the agricultural sector and a high percentage of land is still under rural collective ownership. While urbanization has been penetrating into Panyu pervasively, locally-initiated industrialization and profitable development of land for non-agricultural uses are commonplace. Both top-down urbanization (city government coordinated projects on land converted to state-owned) and bottom-up one(rural community coordinated projects on land still owned collectively) get more intense

in the areas closer to the city. Situated adjacent to the Guangzhou central city, Dashi, one of Panyu's 19 townships, is composed of 14 villages with a total area of 18.4km² which accommodated about 97,000 residents in 2002, of which about 54% (52,000) were recent migrants living in Dashi temporary. With only one-third of its lands in agricultural uses and two-thirds in non-agricultural uses, Dashi is a rapidly urbanizing high density township in the urban periphery (see Figure 3).

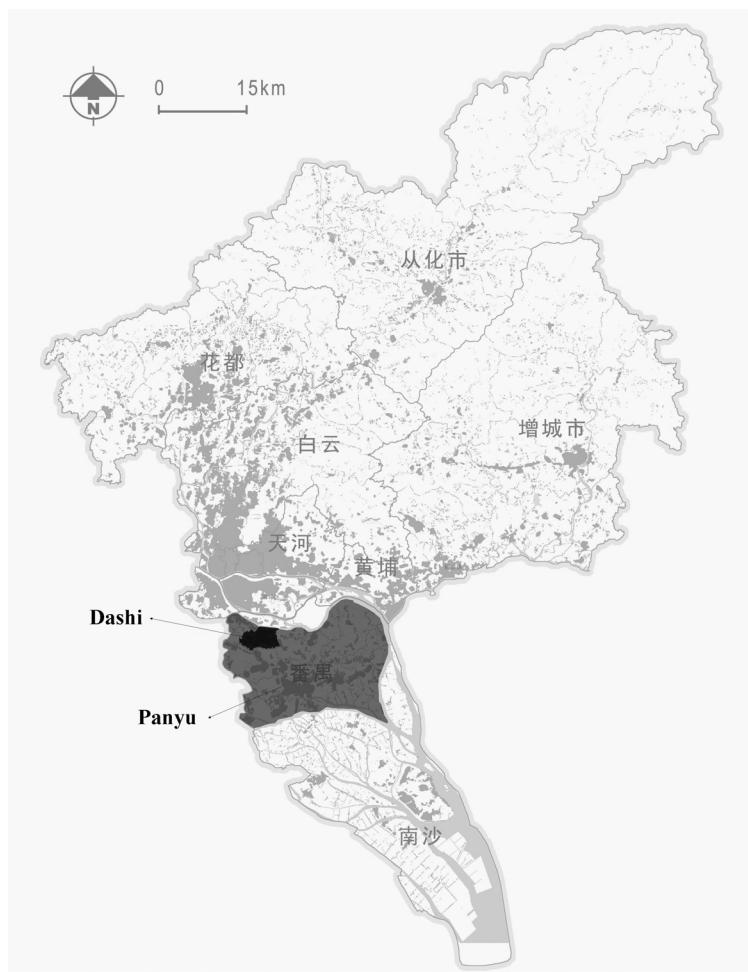


Figure 2: Dashi Township in Panyu District, Guangzhou

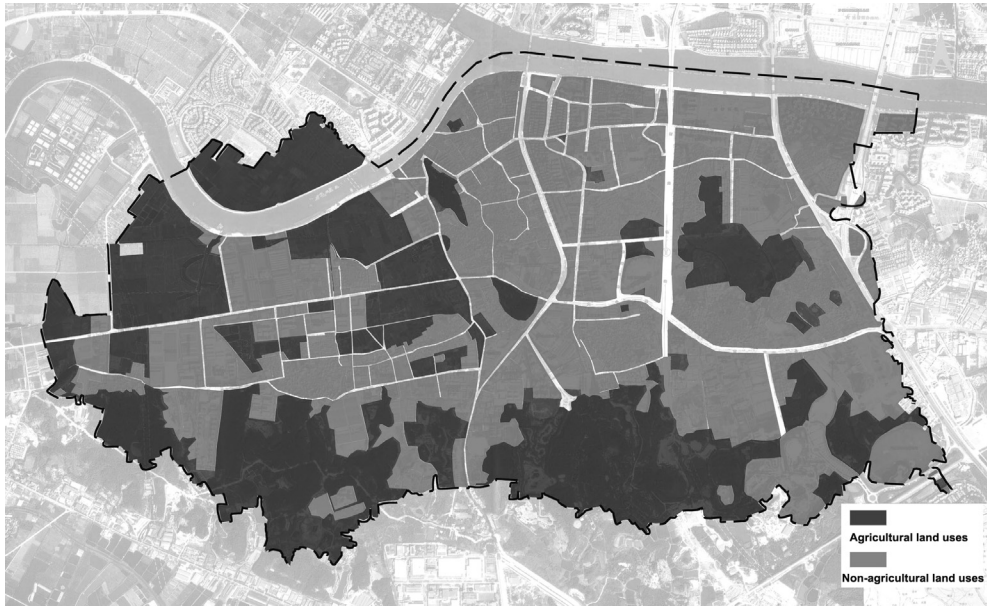


Figure 3: Rural and urban land uses in Dashi Township

4. Institutional uncertainty in the emerging land development market

Urban land has been owned by the state on behalf of the people since 1949 when the People's Republic of China was founded. Not being considered a commodity according to Marxist principles of socialist people's ownership, land was deemed a means of production only and thus economic transactions of land were non-existent. As a component in the package of economic reforms, socialist people's land ownership has been reformed since 1988 when land leasehold was invented to accommodate a market-oriented economy. An amendment to the 1982 Constitution made in 1988 legalizes the public land leasing as such that urban land can be leased to developers or users for a fixed period of time upon a payment of rental in lump sum to the state. Thereafter, land has been restored as an economic asset with investment value, which entails institutional change in land rights. Property rights are clearly delineated and defined over

the land supplied under the newly invented leasehold (Tang, 1989). An emerging urban land market has been evolving ever since.

However, land is still basically considered a means of production in the rural domain. According to China's Constitution (1954), agricultural land belongs to the rural community as long as land is used for agricultural farming. Rural land in agricultural uses is reasonably well protected for the agrarian community under the collective land ownership. Nevertheless, the rights to derive income and to develop for higher and better uses are not secured to the collective community when a land plot is changed from its agricultural use to a non-agricultural use. The notion of land being a means of production only grants land use rights to "owners", as the rights to derive income and to develop for non-agricultural uses are considered attributes of land as assets. Thus, urbanization in the peri-urban areas where a substantial amount of land is converted has caused confusions and conflicts over landed interests among stakeholders. The problematic definition of land rights during transition constitute institutional uncertainty.

4.1 Ambiguous land rights

According to China's Constitution (1998), rural land is collectively owned by the agrarian community which is composed of three entities: township, administrative village and natural village (Ho, 2001). Land ownership is vested with the three hierarchical collective entities, and the

natural villages are the main owners. Nevertheless, how much each entity is entitled to is never clearly stated, and thus rights over land are ambiguously delineated among its co-owners (Cai, 2003). Moreover, demographic boundaries and structures of the natural village are continuously changing as new members (births and marriages) join in and existing members drop out (deaths and emigration). The land owners themselves are a variable which changes constantly. Rozelle and Li

(1998) have unveiled heterogeneity in land-readjustment practices among townships and villages. It is suggested that “land-rights variations among villages are due to systematic differences in the way local authorities manage land resources” (p.437). It thus rejects the assumption that rural land rights are clearly defined, as if it is the case, land management practices should not deviate significantly among townships and villages.

Another aspect of ambiguity exists in the rights over collective land. The rural collective can convert farming land to non-agricultural uses for public facilities (schools, clinics etc), village housing, rural industries, shops etc. Rural industrialization since the 1950s has created well-known “commune-brigade enterprises” (*shedui qiye*) or “township-village enterprises”(*xiangcun qiye*) which employ local labors and use local materials to support agricultural production (Byrd and Lin, 1990). Those small-scaled rural industries have provided industrial employment to those made redundant by the primary farming, and become one of the major forces transforming peasants’ life and building up a local social service system. Before 1982, decisions to use land for non-agricultural activities were made at the commune or township level (Ho and Lin, 2003). Pursuing higher income-yielding activities is in the best interest of the agricultural community. Rural industrialization thus has stimulated growth of non-agricultural land uses on the one hand. On the other hand, loss of arable land is also aggravated by rapid urbanization driven by the drastic economic transformation.

Concerned with large-scale agricultural land loss and security for food supply, the central government in its Land Management Law (1986) promulgates centralization of the management over rural land development for non-agricultural uses to the government at the county level or above (Brown, 1995; Ash and Edmonds, 1998; Smil, 1999; Lin and Ho, 2005). Only the state has the right to convert rural land to urban uses. Thus, ambiguity sets in the collective landownership whether the

collective has the right to derive income from land by leasing it out, and the right to change its form and substance by developing it for non-agricultural activities.

4.2 Incomplete land rights

As land is a special property because of its intrinsic attributes of location fixity and resultant externalities, land use and development rights have to be defined by land use planning in order to internalize detrimental externalities which may be caused by individual land developments against other land users in the neighborhood. Ex ante designation of land uses and development parameters maintains the landed interests in relation to the neighborhood spatial structure. Providing certainty and order to the land development market, land use planning plays an essential role for making land markets efficient and equitable. State regulatory intervention in the land market is well recognized as necessary in order to deal with market failures such as externalities and underproduction of public goods, which are more or less caused by uncertainty in the market (Pigou 1932; Nelson 1977; Brabant 1991; Lai 1999).

Land utilization in the rural jurisdiction is autonomously managed by the collective, according to the Land Management Law (1998). Although land use planning for villages and market towns, coordinated by the township government, is recommended by the central government in its “Regulations on Management of Village and Market Town Planning and Development” issued on June 29, 1993 (<http://www.jincao.com/fa/law19.20.htm>, accessed on 14 August 2008), the proposed land use coordination at the township level is often resisted by villages which autonomously manage their land resources. As a matter of fact, a statutory land use planning system, considered as an urban institution, has not been established formally in the rural jurisdiction, and land utilization is practically at the discretion of the village heads or villagers themselves.

Land users are thus not protected from adverse externalities generated in the

neighborhood when residential density and land use intensity are on the rise. In the setting of high density and land scarcity, “self-contained” village economies inevitably generate a fragmented pattern of land utilization with an intense mixture of agricultural and non-agricultural (such as housing and factories) land uses (Jiang and Liu, 2003; Yang and Liu, 2004; Yuan, Yi and Wang, 2005; Yuan etc, 2009). If development control is highly discretionary without necessary certainty, or it does not exist at all, land users and residents do not have the right not to be affected by negative externalities generated in the neighborhood.

5. Disordered land development as a result of institutional uncertainty

5.1 Disorderly competition for land rent differentials induced by ambiguous land rights

Land rents are the value of land appropriated in the economic transactions, for the market price of land is interpreted as capitalized land rents. The rent of a land plot is largely determined by the equilibrium of demand for and supply of land as commodity at its designated use (agricultural, residential, commercial and so on) by zoning. The potential land rent represents an amount of rents that can be capitalized under the “higher and better use”. The gap between the potential land rent based on the “higher and better use” and the actual land rent capitalized under the present land use constitutes the land rent differential (Smith, 1979). Capture of land rent differentials gives land owners sufficient incentive to redevelop land parcels. Nevertheless, land rents are appropriated under a structure of land rights. Rising intensity of economic activities and population density in the peri-urban areas into which urbanization is rapidly penetrating have accentuated the potential value of land in the villages, and thus intensified the competition for land resources over which the property rights are ambiguously delineated. Barzel (1989) maintains that land rents are subject to grabbing if land rights are ambiguously delineated, and land rents

in this case will be capitalized hastily and injudiciously before the opportunity vanishes.

Land development in Dashi, where 64 percent of its territory has been urbanized, is spatially fragmented all over the township with extensive mixture of agricultural and non-agricultural land uses. On average, a village in Dashi has a land area of 132 ha, accommodating 3,100 residents, with 24 ha of its land used for village industries which usually yield pollutants to the air and rivers, 21 ha for village housing and 7 ha acquired by the city government for urban commodity housing (see Table 3). There are two types of land urbanization spatially intermingled. One is the bottom-up rural industrialization and village housing development initiated by the collective; the other is the top-down penetration of urban development projects sponsored by the city state (see Figure 4). The former does not change the nature of land ownership, as the land is still owned by the collective community, while the latter entails change of landownership from the collective to the state.

Table 3: Land uses of Dashi Township

Land uses	Area (ha)	As % of the total township area	Various land uses of an average village (ha)
Township and village industries	342.5	18.6	24
Village housing	294.1	16.0	21
Urban commodity housing	95.1	5.2	7
Agriculture and woods	671.5	36.5	48
Others	437.9	23.7	32
Total	1,841.1	100.0	132

Source: the author's survey

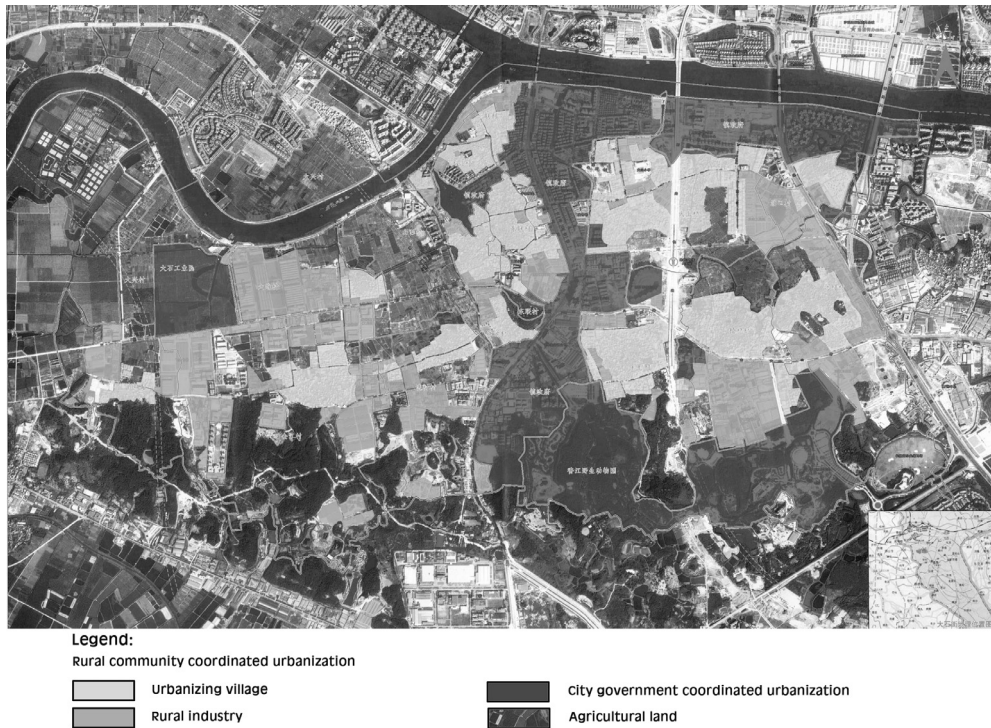


Figure 4: State-sponsored and collective-initiated land urbanization in Dashi Township

Buttressed by the Land Management Law (1986), agricultural land can be legally acquired by the city government in the course of urbanization before its leasehold is sold to a developer for a land lease premium based on the new land use. Conversion of collective landownership to the state requires compensation paid to the collective owners based on the land value at existing land uses, i.e. agricultural farming, instead of the potential value derived from the new urban land use. To capture the land rent differential which is the gap between the compensation fee (the actual land rent) and the land lease premium (the potential land rent) intensifies competition between the urban state and rural collectives.

As the main interest of the local government is to promote local growth, one of the key

objectives of the municipal government is to mobilize land resources and thus to facilitate local economic development. Since the 1988 land reform, city governments, being local agents managing state's land assets, have been keen on making land available for urban development and enriching the municipal coffers with land revenues so as to improve urban infrastructure and amenities. Mobilizing the local land resource, instead of managing it in the best interest of the state for the whole people, has become a key thrust of the local government's pro-growth drive. It is reported that acquisition of agricultural land by the municipal governments has been pervasive. About fifty-odd cities had built large new university districts¹⁾ by 2005(<http://www.landscapecn.com/news/html/news/detail.asp?id=29730>, accessed on 11 July 2006). There were 3,837 industrial development zones in 2003, occupying a total of 36,000 sq km land nationwide(<http://www.people.com.cn/GB/14857/22238/28463/28464/2015058.html>, accessed on 21 June 2004). Excessive provision of land for urban manufacturing was also driven by the desire of capturing land rents.

The goal of local municipal governments is to advance developmental strategies that can stimulate local growth and expand local fiscal capacity. In the same vein, the rural collective is also seeking its local development and revenues. Land rents are thus keenly sought after in the context of twofold competition between the rural collective and the urban state, and among the joint owners within the rural community. In the name of stimulating village economies, some land development projects are carried out under the disguise of legitimate provision of premises to village's economic activities. As a matter of fact, many land parcels are developed to be rented to inward industrial investors. Thus, the real motivation of land development is to capture the coveted land rents, which makes land development a pure real estate business. Using land as assets, rather than "a means of production", is not considered legitimate by the state, and thus land development for the purpose

1) The university district is a sizable zone in the urban periphery where a cluster of universities and student accommodation facilities are located. These universities used to be scattered in the central area cramped for space.

of rent-taking is clandestine, informal and opportunistic. Though the state-sanctioned land management rules require that land for village housing should be used for owner-occupation only, and villagers cannot rent out housing space to earn rental income, it is a common practice that villagers ignore the rules by building their family houses to a size much bigger than what the households actually need. As those extra spaces are leased out, land rent differentials are taken by the villagers.

Land development becomes a pre-emptive measure against potential rent-taking by other stakeholders, resulting in land development for the sake of rent-taking. Ambiguous delineation of collective land rights gives rise to a land development market where covert and disorderly competition for land rent differentials prevails under the guise of land development for the economic growth of townships and villages. Usually ill-conceived and hastily-executed, those developments are often not carried out in the best interest of long-term sustainability. Those land parcels are not used most appropriately in terms of social welfare, economic efficiency and ecological integrity. ²⁾ Under-utilization of scarce land resources results in more land developed to meet the rising need from dynamic urbanization, which worsens the problem of land scarcity. Extensive mix of agricultural and non-agricultural land uses in every village reveals that villages, instead of the township, are the basic autonomous units responsible for rural development. Also, the fragmented and piecemeal pattern of land development for urban uses unveils that bargaining negotiation for land acquisition between the urban state and the rural collective occurs at the village level. In the setting of high population density, spatially fragmented land development is conducive to neither rural farming nor urban living.

2) Apartments and houses with “minor property rights” are those housing units built on the collective land plots and sold to those who are not local residents by the villagers who are keen on taking land rent differentials. With only the use right but not the full ownership rights, those housing units are only worth about half of the housing value with formal ownership certificates (<http://www.focus.cn/news/2005-11-09/164295.html>, accessed on 19 February 2007). Land rents dissipate as a result.

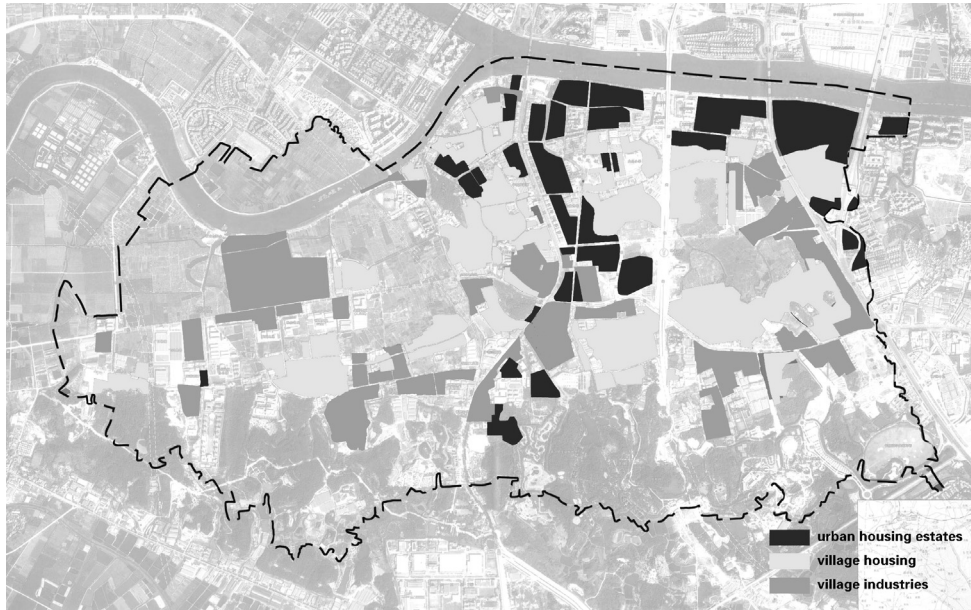


Figure 4: Extensive mixture of village housing, township/village industries and urban housing estates in Dashi

5.2 Environmental deterioration caused by incomplete land rights

The dispersed pattern of urban commodity housing estates in Dashi should be attributed to bargaining negotiation between the urban state and the rural collective in the absence of formal statutory land use planning in the township. Without coordination of land use planning, opportunistic land acquisition leads to land development in a spatially haphazard manner. Industrial development at the village level and self-developed village housing in land-scarce Dashi create negative externalities. Uncontrolled detrimental externalities are aggregated, and the township environment deteriorates. Environmental amenities are over-consumed in the neighborhood. Uncontrolled developments result in substandard, inferior and deteriorating habitations. Land utilization becomes suboptimal, and land values depreciate in a worsening environment.

Construction without effective development control imposes externalities on the neighborhood where incompatible land uses could be next to each other. Individual better-off (e.g. maximization of building floor areas) leads to neighborhood worse-off (e.g. over-consumption of open space and blocking adequate light and air to neighboring buildings) (Bowers, 1992). There is rent transfer from the party who suffers from externalities to the party who inflicts externalities by building more than what is allowed. Nevertheless, the transferred rent is not secured, as incessant tit-for-tat in the neighborhood causes further rent transfers which aggregate and exacerbate externalities continuously.

As a result, land rents diminish continuously and the neighborhood environment deteriorates, demonstrated convincingly by the dismal phenomenon of “urbanizing villages” in many China’s cities, in the absence of decent affordable rental housing supposedly provided by the government to the low-income residents as well as migrants. Accommodating many times more residents than their intended capacity, “urbanizing villages” are of extremely high density, the highest record being 411,000 residents per square kilometer in one of those in Shenzhen (Du, 1999). Infrastructure and public amenities are provided at a minimum level. Only about 10% of land is used for social facilities and open space, while the planning regulations require 25 – 35% of land in the city for those uses (Jin, 1999; Tian, 2008; Wu, 2009). Unclear delineation of land use and development rights in the absence of land use planning encourages appropriation of land rents at the expense of neighborhood interests, and thus results in deterioration of the built-up environment quality.

6. Institutional change: private governance in place of deficient public governance

6.1 Land rent dissipation as a result of deficient public governance

Resulting from an absence of the regulatory state in the midst of changing governance, disorderly competition for land rent differentials and environmental deterioration caused by ambiguous and incomplete land rights are a sign of deficient public governance, exacerbated in the setting of high density,. China as an ancient nation with a large population has long been run according to Confucianism as a cultural cornerstone which regards the state the only credible institution that can manage society. Stability of the nation was only interrupted periodically by chaotic anarchy followed by the decay of dynasties. The market as a mechanism of provision and allocation had never been fully nurtured up. Pursuit of economic growth since the reform has inevitably forced the state to discharge its role of the absolute provider and to give room for bottom-up initiatives. Due to path-dependency, the socialist authoritarian state is changing from its pre-occupation with political ideologies to the pursuit of economic development in order to legitimize itself by improving the livelihood of its citizens.

In the process of decentralization as the key measure of the reforms, local governments, used to be passive agents of the central government, are made active actors pursuing local growth (Solinger, 1992; Nolan, 1995; Unger and Chan, 1995; Wong, Hedy and Woo, 1995). Advancing development strategies that can stimulate local growth and expanding fiscal capacity become two indispensable goals for local governments (Wong, 1987; 1992). China's local governments have become an economic interest group with their own policy agendas and preferences, and thus the local developmental state, thanks to its origin of the socialist state(White and Wade, 1988; Woo-Cumings, 1999; Zhu, 2005). Intimately involved in the economic

production, the pro-growth local developmental state has not possessed, intentionally or unintentionally, adequate regulatory capacity for the management of the economy and society.

Ambiguous delineation of land rights and unclear delineation of land use and development rights by the state as the third party show the absence of regulatory functions of the state. An absence of land use planning may not be a serious problem to the usually low-density and low-intensity rural communities. The characteristics of Dashi's peri-urbanization have shown that China as the most populous nation undergoing rapid urbanization has been facing a serious challenge. For the low-income developing countries with high population density and thus acute scarce land resources, urbanization is made unsustainable by the disordered competition and uncoordinated development.

Disordered competition for land rents and ineffective land use planning coordination give rise to sprawling of substandard developments. When a planned urban housing quarter with required public goods and amenities is in the vicinity of a crowded village with a paucity of open space as a result of uncontrolled developments, trespassing is inevitable by the village residents into the housing estate to seek the enjoyment of environmental amenities (see Figure 5). When the urban environmental quality deteriorates due to either disorderly developments or worsening security as a public good, the value of premises declines, and thus land rents dissipate.

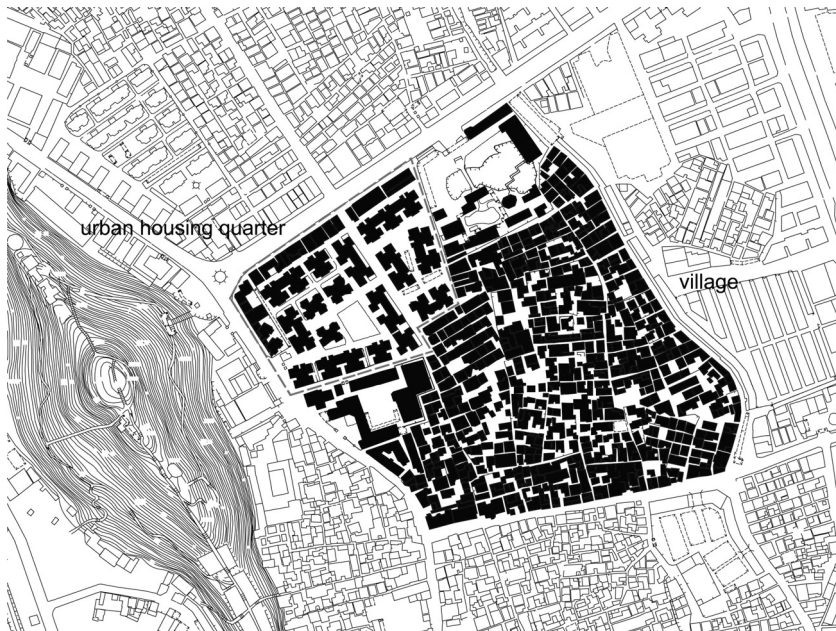


Figure 5: Spillover of externalities from a crowded village into a planned housing estate, Dashi

6.2 Gated housing estates as private governance to curb land rent dissipation

When public governance by the state fails, private governance by the market arises to fill the void. The gated community as private governance is a well-known phenomenon in both the developed and developing countries (Glasze, Webster and Frantz, 2006). Worsening public security and inadequate urban amenities as public goods are considered as two primary causes for the rising momentum of gated communities. Gated housing estates are fenced-off, and property rights over the residential environment are well defined and managed by the developers initially and subsequently by the homeowner associations. If public goods are underprovided and amenities over-consumed in the public domain, excludable collective goods and amenities can be protected by the clear property rights in the private domain (Webster, 2002, see Figure 6).



Figure 6: Two kinds of governance in Dashi: open village settlement versus gated housing estate

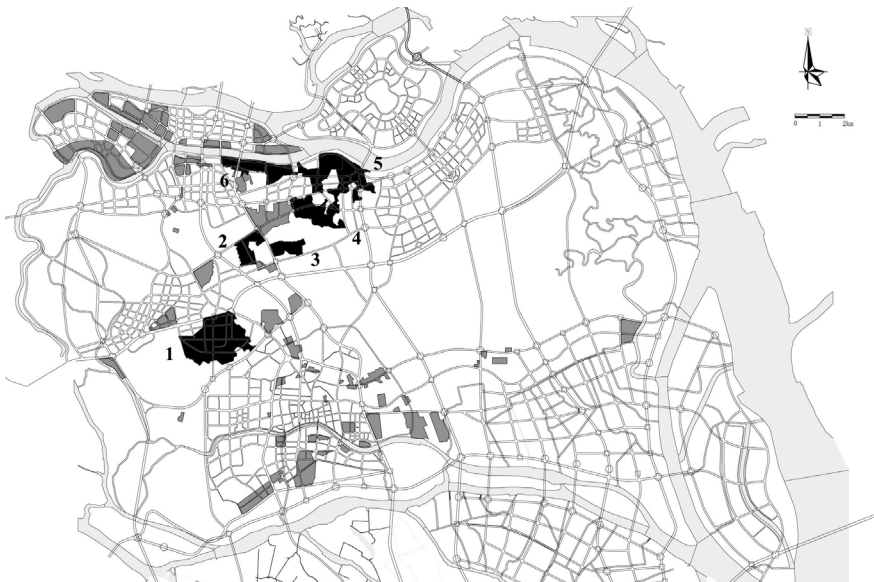
Because of well-defined and ascertained property rights, privately-planned gated housing estates are able to use land more efficiently and offer better living environment than spontaneously-developed villages without collective planning in the setting of high population density. In Figure 6, the village settlement reaches to a plot-ratio of 0.49 and site-coverage 34.7%, while the planned housing estate has achieved a plot-ratio of 1.7 and site-coverage 23.9%. On the one hand, the village is still urbanizing, and its open space is not protected and will be encroached upon under the heavy pressure of urbanization. Its trajectory is evidently shown in many urbanizing villages in the Pearl-River-Delta region (Tian, 2008). On the other hand, environmental amenities in the urban housing estate are under control, protected by the condominium property rights. The mode of high-plot-ratio with low-site-coverage is considered more efficient and sustainable in terms of land utilization than the mode of low-plot-ratio with high-site-coverage, as the former offers more housing

and open spaces than the latter. In view of the ongoing dynamic urbanization, the development mode of the village only represents the interests of the status quo (existing residents), as the village's capacity of accommodating migrant newcomers is much less than a planned housing estate.

Being a global phenomenon, gated communities are not unfamiliar to the China's urban middle classes. Gated communities are associated with exclusiveness and coveted privileges derived. Almost all newly built urban housing estates have been gated in China. Nevertheless, gated housing estates in the suburbs were unheard of in China up to the late 1990s. China has been a predominantly agrarian society up to now, as more than 50 percent of its populace are engaged in the agricultural sector. Rural living has a connotation of backwardness, instead of a romantic and peaceful feeling towards country living in the developed countries. Living in the suburbs, or suburbanization, is not perceived as related to modern life. People's psyche is that city living means modernity and quality. Central locations are always popular, demonstrated by much high housing prices in the city centers. Therefore, it was phenomenal, even revolutionary, that Chinese-styled suburbanization occurred in Guangzhou in the late 1990s for the first time when the idea of suburban living was still related to peasantry. Super-scale gated housing estates leapfrogged to locales further away from the peri-urban areas and emerged in the far suburbs where greenfields lay undeveloped and the environment was wholesome (see Figure 7 and Table 3). Although substantial demand for decent living environment was evident from rising middle classes, this risky undertaking was fundamentally stimulated by the fact that environmental quality in the peri-urban areas was deteriorating due to unplanned and fragmented developments in the absence of effective public governance.

Because of the advantage of economies of scale, those super housing estates can provide a variety of services and facilities as club goods which are not found elsewhere. The first super-scale gated housing estate, Clifford Estates, was initiated

in 1991 by a Hong Kong developer returning to his hometown Panyu. It had developed about 50,000 housing units by 2006 with schools (primary, secondary and international), a hospital, and estate buses serving residents commuting between the Clifford Estates and the central city of Guangzhou. The developer effectively assumes the role of a mayor serving 150,000 residents, albeit his “constituency” is composed of the customers of middle-class home owners. Land rent dissipation and consequent environmental deterioration in the peri-urban areas because of ineffective public governance are prevented in the Clifford Estates by the private governance. However, social segregation and inequality are exacerbated as low-income residents are excluded from gated housing estates and increasingly concentrated in ever-deteriorating villages. This social dichotomy is clearly created by the land development market in the absence of effective public governance.



Notes: 1. The shaded areas are gated housing estates. 2. The numbered shaded areas are super-scale gated housing estates (see Table 3 for detail).

Figure 7: Super-scale gated housing estates in Panyu

Table 3: Super-scale gated housing estates in Panyu

No.	housing estates	size (ha)	No.	housing estates	size (ha)
1	Clifford Estates	390.2	4	Yajule Garden	311.9
2	Jingxiu XiangjiangGarden	87.6	5	Huanan Newtown	202.5
3	Huanan BiguiGarden	69.2	6	Xinghe Bay	80.0

Source: Archive of Panyu Planning Bureau

6. Conclusion

The gradual and incremental reforms are intended as cautious institutional change, and thus social stability has been maintained without calamitous clashes which were often the cases in the long Chinese history. Rent-seeking derived from dualism is, however, rampant. Institutional uncertainty emerges and generates ambiguous and incomplete land rights which subject land rents to open access by the stakeholders. Ambiguously delineated property rights over the collectively-owned land induce hasty and disordered capitalization of land rents, as land development becomes a pre-emptive measure against potential rent-taking by the competing stakeholders, and land is developed for the sake of rent-taking. The taking of land rent differentials has direct impact on the mode of land development. Disordered land rent competition is one of the key factors responsible for spatially fragmented and disorganized intense-mix of agricultural and nonagricultural land uses. Land rents dissipate as uncontrolled externalities cause the environment to deteriorate.

In the context of high population density and thus acute land scarcity, ambiguous and incomplete land rights have led to deterioration of environmental quality in the peri-urban areas. In the absence of effective governance by the state and orchestrated collective action, private governance emerges from the market in the form of suburban

super-scale gated residential estates with well-defined property rights over the fenced-off sites. Chaotic and disorganized peri-urbanization prompts first-of-its-kind suburbanization with Chinese characteristics. Though private gated communities meet the aspiration of a rising middle-income class for a decent living environment, social segregation inevitably arises. The urbanization characterized by the suburbs dotted with super-scale gated communities and the peri-urban areas with environmental deterioration is not deemed environmentally, socially and economically sustainable. Guangzhou has set a worrying precedence. There is a dire need for credible institutions to coordinate drastic social and economic changes during the transition. Land rights have to be clarified and public governance strengthened. The local developmental state has to assume the role of regulatory state, so as to prevent social segregation and environmental degradation from further worsening.

References

- Bowers, J., 1992, The Economics of Planning Gain: A Re-appraisal, *Urban Studies*, 29(8), 1329-1339.
- Brabant, J. M., 1991, "Property Rights' Reform, Macroeconomic Performance, and Welfare", in *Transformation of Planned Economies : Property Rights Reform and Macroeconomic Stability*, Eds. H Blommestein and M Marrese, (OECD, Paris), 29-49.
- Byrd, W. A. and Lin, Q., Eds., 1990, *China's Rural Industry : Structure, Development and Reform*. New York : Oxford University Press.
- Cai, Y. S., 2003, Collective ownership or cadres' ownership? the non-agricultural use of farmland in China, *The China Quarterly*, 175, pp. 662-680.
- Chinese and Foreign Real Estate Times, 1996, *A Market Analysis*, No. 18, 20-21, (in Chinese).
- Commons, J. R., 1934, *Institutional Economics, Its Place in Political Economy*, New York : Macmillan.
- Cornell, S. & J. P. Kalt., 1997, Cultural Evolution and Constitutional Public Choice - Institutional Diversity and Economic Performance on American Indian Reservations, in J. R. Lott, Jr., editor, *Uncertainty and Economic Evolution*, London and New York : Routledge, 116-142.
- Du, J., 1999, The Choices Faced by "Villages-in-the-city" in the New Millennium. *City Planning Review*, 23. 9, 15-17 (in Chinese).
- Eggertsson, T., 1994, The Economics of Institutions in Transition Economies, in S. Schiavo-Campo, editor, *Institutional Change and the Public Sector in Transitional Economies*, Washington, D. C.: World Bank, 19-50.
- Elster, J., 1989, *The Cement of Society-A Study of Social Order*, Cambridge: Cambridge University Press.
- Glasze, G., C. Webster and K. Frantz (Eds.), 2006, *Private Cities - Global and Local Perspectives*, New York: Routledge.
- Guangdong Bureau of Statistics, 2003, *Statistical Yearbook of Guangdong*, 2002, Beijing: China Statistical Publishing House, (in Chinese).
- Guangzhou Bureau of Statistics, 2008, *Statistical Yearbook of Guangzhou*, 2007, Beijing: China Statistical Publishing House, (in Chinese).
- Hardin, G., 1968, The tragedy of the commons, *Science*, 162, pp. 1243-48.
- Hayek, F. A., 1973, *Law, Legislation and Liberty*, Vol. 1, Rules and Order, Chicago: The University

of Chicago Press.

- Heiner, R. A., 1983, The Origin of Predictable Behavior, *American Economic Review*, 73(4), 560-95.
- Ho, P., 2001, Who owns China's land? Property rights and deliberate institutional ambiguity, *The China Quarterly*, 166, pp. 394-421.
- Hsing, Y. T., 2006, Brokering power and property in China's townships, *The Pacific Review*, 19(1), pp. 103-124.
- Jiang, S. S. and S. Y. Liu, 2003, Land capitalization and rural industrialization - a survey of economic development in Nanhai, Fushan, Guangdong, *Management World*, 11: 87-97, (in Chinese).
- Jin, D., 1999, A Survey on "Villages-in-the-city". *City Planning Review*, 23.9, 8-14, (in Chinese).
- Lai, L. W. C., 1999, "Hayek and Town Planning: A Note on Hayek's Views towards Town Planning in *The Constitution of Liberty*", *Environment and Planning A*, 31, 1567-1582.
- Liao, K. Y., 1994, China's Urban Land Market, in IFTE/CASS and IPA (Eds) *Urban Land Use and Management in China (Special Reports and Appendices)*, Beijing: Economic Sciences Publishing, (in Chinese).
- Ma, L. J. C., 1976, Anti-urbanism in China. *Proceedings of the Association of American Geographers*, 8, 114-118.
- National Bureau of Statistics of China(NBSC), 1999a, *Comprehensive Statistical Data and Materials on 50 Years of New China*, Beijing: China Statistics Press.
- National Bureau of Statistics of China (NBSC), 1982b; 1991b; 1992b; 1996b; 1997b; 2002b; 2004b; 2005b; 2009b, *Statistical Yearbook of Chinese Cities*, Beijing: China Statistics Press.
- National Bureau of Statistics of China(NBSC), 2009, *The China Statistical Yearbook 2008*, Beijing: China Statistics Press.
- Nelson, R. H., 1977, *Zoning and Property Rights: An Analysis of the American System of Land-use Regulation*, Cambridge, Mass.: MIT Press.
- Nolan, P., 1995, Politics, Planning, and the Transition from Stalinism: the Case of China, in H. J. Chang & R. Rowthorn, (Eds.), *The Role of the State in Economic Change*, Oxford: Clarendon, 237-261.
- North, D. C., 1991, Institutions, *Journal of Economic Perspectives*, 5(4), 97-112.
- North, D. C., 1990, *Institutions, Institutional Change and Economic Performance*, Cambridge: Cambridge

University Press.

- Pigou, A. C., 1932, *The Economics of Welfare*, 4th Edition, London: Macmillan.
- Rozelle, S. and G. Li, 1998, Village Leaders and Land-Rights Formation in China, *The American Economic Review*, 88(2): 433-438.
- Schotter, A., 1981, *The Economic Theory of Social Institutions*, Cambridge: Cambridge University Press.
- Shackle, G. L. S., 1961, *Decision Order and Time in Human Affairs*, Cambridge: Cambridge University Press.
- Shanghai Bureau of Statistics, 2001, *Statistical Yearbook of Shanghai*, Beijing: China Statistical Publishing House (in Chinese).
- Shen, J., 2005, Counting Urban Population in Chinese Censuses 1953 – 2000: Changing Definitions, Problems and Solutions, *Population, Space and Place*, 11(5), pp. 381-400.
- Smith, N., 1979, Toward a theory of gentrification: a back to the city movement by capital not people, *Journal of the American Planning Association*, 45, pp. 538-548.
- Solinger, D. J., 1992, Urban Entrepreneurs and the State: the Merger of State and Society. In A. L. Rosenbaum (ed.), *State & Society in China: The Consequences of Reform*, pp. 121-142, Boulder, CO: Westview.
- Tang, Y., 1989, Urban land use in China: policy issues and options, *Land Use Policy*, 6, pp. 53-63.
- Tian, L., 2008, The Chengzhongcun land market in China: Boon or bane? -A perspective on property rights, *International Journal of Urban and Regional Research*, 32(2): 282-304.
- Unger, J. and A. Chan, 1995, China, Corporatism, and the East Asian Model. *The Australian Journal of Chinese Affairs*, 33, pp. 29-53.
- Webster, C., 2002, Property rights and the public realm: gates, green belts, and Gemeinschaft, *Environment and Planning B: Planning and Design*, 29: 397-412.
- White, G. and R. Wade, Eds., 1988, *Developmental State in East Asia*, New York: St. Martin's.
- Williamson, O. E., 1985, *The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting*, New York: The Free Press.
- Wong, C. P. W., 1992, Fiscal Reform and Local Industrialization: The Problematic Sequencing of Reform in Post-Mao China, *Modern China*, 18(2), pp. 197 – 227.
- Wong, C. P. W., 1987, Between Plan and Market: The Role of the Local Sector in Post-Mao China,

Journal of Comparative Economics, 11, pp. 385-398.

Wong, C. P. W., C. Heady and W. T. Woo, 1995, *Fiscal Management and Economic Reform in the People's Republic of China*, Hong Kong: Oxford University Press.

Woo-Cumings, M., Ed., 1999, *The Developmental State*. Ithaca, N. Y. and London: Cornell University Press.

World Bank, 1992, *Government and Development*, Washington, D. C.: World Bank.

Wu, F. L., 2009, Land development, inequality and urban villages in China, *International Journal of Urban and Regional Research*, 33(4): 885-889.

Yang, M. H. and Y. X. Liu, 2004, Suppression and struggle: a theoretical framework for rural land development rights, *Finance and Economics*, 6: 24-28, (in Chinese).

Yuan, Q. F. X. F. Yi and X. Wang, 2005, From urban-rural integration to real urbanization - review of Nanhai development, *Urban Planning Forum*, 1: 63-67, (in Chinese).

Yuan, Q. F. etc, 2009, Rural land development in urban-rural integrated planning, *Planner*, 4: 5-13, (in Chinese).

China, *Urban Studies*, 42(8), pp. 1369-1390.