Can Land Policy Be Effectively Used to Promote Urban Development: What Do We Learn from China

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1. Introduction

Perhaps China witnesses one of most dynamic and fundamental transformation in the last two decades of 20th century. It started with reform in institution and policy governing economic growth, whose rapid growth rate in turn pushes and drags administrative and policy changes. Therefore, at the point of turning into 21st century, it is difficult to determine a clear cut causal-effect relationship between economic growth and institutional changes and distinguish which one is the driving force. China remarkable economic growth is manifested in aspects of fixed investment, industrial output, GDP, foreign trades etc. (more here).

Remarkable economic growth is accompanied by fast urbanization. Villages and towns are converted into industrial parks, economic development districts, or acquired for commercial housing projects. The pace of urban encroachment into rural areas is so amazing that decision makers increasingly concern the food security that they believe largely relies on amount of farmland. At the same time, majority of farmers remain poor, being denied benefits from economic success.

Urbanization, housing construction, and built-up areas all grew rapidly. Urbanization rates were 18% in 1978, 30 in 1995, 36% in 2000 and more than 40% in 2004.1 Together rising total population, rapid urbanization implies massive migration from rural areas to settle in cities. In the 20 year period from 1979 to 1999, 5.2 billion square-meters of residential construction were completed. This means 260 million square-meters of residential units were constructed annually. This remarkable housing development has substantially increased housing consumption for urban and town residents. Housing consumption per capita in cities and towns increased from 3.6m² in 1979 to 9.8m² in 1999.2 This has resulted in urban spatial expansion in an enormous

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1 Sources: http://www.chinacsw.com/xinwen/dyt.htm
2 Sources: http://www.dajun.com.cn/fangdichan.htm
http://210.72.32.6/cgi-bin/bigate.cgi/b/g/http@www.stats.gov.cn/tjfx/ztfx/jwxfxbg/t20020530_20841.htm
way. Urban built-up areas increased by 47.68% in the period of 1989-1997 in Zhujiang Delta (Weng, 2001). Zhejiang province, another fast growing region along China’s coastal area, witnessed nearly a half million mu\(^3\) annual increase in land use for buildings from 1996-2003.

These economic achievements are either accompanied or driven by institutional changes whose primary goals are to mobilize resources such as labors and capitals, to privatize economy, and ultimately to promote governance and roles of market principles in resource allocation and uses. Land as one of important input elements has played an important role in urban development in the past 15 years. Like other institutional changes, land reform is also marked by gradualism and piece-meal approach, even though it may have fundamental impacts on the ways in which society operates. This paper will review land policy reforms, discuss their impacts on urban growth, and finally focus on challenges and prospects of future land policy reform. The paper is organized as follow. Institutional framework governing land development, following the introduction, is followed by major land reforms in the post-reform era. The second section to the last focuses on the assessment on urban growth. The paper wraps up with discussions on challenges and prospects.

2. Institutional Arrangement Governing Land Development before 1978

Prior to economic reform, ownership structure was quite simple. Virtually there were not private sectors (or private economy accounted for less than 10% of total national growth domestic products). Enterprises were owned by either the state (so called public own) or collective units. Enterprises could sit in either cities, or towns, or rural areas. Private land ownership did not exist. Thus either the state or a collective unit own land. The state owned land was 1) all land in cities and towns; 2) natural resources such as forests and water bodies; 3) mining and manufacturing establishments that were owned by the state; and 4) other land designed by laws. Land used by farmers in rural areas was collectively owned by communes.

The state owned land was allocated free of charge to Danweis for indefinite period of time. A Danwei was a socioeconomic unit that very likely performed dual roles: production of goods and services and provision of housing for its own employees. In the planned regime, it was not

\(^3\) Mu is an area unit in China. One mu is 666.67 square meters.
necessary to have a clear definition of land (property) rights partly because there was ambiguity in interests and rights between the State and enterprises in cities and towns and partly because land was neither commodity nor an asset that was able to generate wealth. Once the use rights of land was assigned to one unit (*Danwei*), it is prohibited to transfer between parties even though land might not be used efficiently. It was required to return unused land to the state. Since there was neither economic incentive nor penalty of not doing so, this seldom happened.

Land development was primarily driven by economic development projects. In the planned economy, governments first worked out short-range (one-year plans) and/or middle range socioeconomic development plans (five-year plans). These plans laid out specific economic growth goals that focused heavily on industrial outputs. And then they decided capital investments after gauging the difference between existing and needed capacities. Finally, governments mobilized capitals, labors, and land to implement economic development projects. Unlike short capital and abundant labors, land was free to use and accounted for only a fragment of total investments in acquisition. Thus land was used to substitute capitals in promoting economic development. This mainly explained low density and underutilized land in many industrial compounds, causing efficient land uses.

Municipal governments increased their land supply through land acquisition, which means a conversion of land ownership from collectively owned to the state owned. The constitution stipulated that municipal governments had to compensate peasants whose land was acquired. Since there were not land markets, what peasants obtained from governments was a compensation package instead of market prices. A compensation package included job opportunities for farmers, resettlement fees, and compensation for crop losses and attached belongings on the ground.

In addition, peasants obtained an urban resident license (called *Hukou*) that allowed them to access social welfare that was not available before. Social welfare included medical insurance,
pension and retirement plans, high quality schools, and subsidized agricultural goods. Hence, peasants considered themselves luck when they became urban residents.

Land development process in the planned economy is distinguished as follows:

1. Urban planning was centered on the project plan, whose geographic scope varied from project to project;
2. Even though there was a long-term general plan, the top-down process of economic development decision-making made it ineffective in guiding urban land use and land development;
3. The nature of ownership structure made it difficult to coordinate land development and adjust land use since enterprises involved belonged to one owner, the state;
4. Price mechanisms and markets were non-existent in the determination of land use and land development.

Under the restrictive influence of these land policies, the following aspects characterized urban spatial patterns in Chinese cities:

- **Spatial distribution of urban population.** Urban population was highly concentrated around the center (Bertaud 1992). This pattern allowed Chinese cities to function with minimum investments in urban infrastructure.
- **Spatial distribution pattern of built-up area.** Compactness of built-up urban areas left virtually no green spaces for a high population density even though capital density was substantially lower than counterparts in other countries (Bertaud 1992). It was not surprising to observe a low rate of floor space per capita across Chinese cities.

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4 China was distinguished by its dichotomous urban-rural structure. Urban residents were able to access social welfare such as pension and retirement, medical insurance, quality schools, accessibility, recreation, and subsidized agricultural products whereas peasants were denied these kinds of social welfare. To make it worse, industrial products were over-priced. Thus, the cities offer higher living standards than rural areas because of the social welfare and price systems. Before 1978, the governments controlled migration from rural areas to cities through a so-called *Hukou* system to maintain the dichotomous urban-rural structure. A *Hukou* is a locality residency that allows a *Hukou* holder to access social welfare that is geographically confined. Social welfare was positively correlated with city size. Thus, residents in larger cities enjoy high-level social welfare than residents in smaller cities.
• **Population density gradient.** Even though urban population density declined outward, urban population patterns were striking in that the density gradient curve was relatively flat and dropped sharply at the urban edges (Bertaud 1992).

• **Land use structure.** In general, the share of residential land was not as big in China as in developed countries whereas industrial use accounted for a substantial portion of urban land. Industrial and residential land uses accounted for 20-30 and not more than 50 percent, respectively (Ding 2003). Land in the industrial sector was clearly over-allocated compared to most market economy cities (Hong Kong 5.3 percent, Seoul 6 percent, and Paris 5 percent) (Bertaud and Renaud 1992).

• **Land use deficiency.** Land use deficiency was reflected in low and flat density, the presence of low-value added sectors in the urban cores, and the coexistence of excessive supply and demand. (Dowall 1993; Bertaud and Renaud 1992; Li 1999).

### 3. Policy Challenges and Issues during the Transitional System

Figures 1 and 2 illustrates economic setting related to land has been changing in 1980s throughout 1990s. First of all, private economy plays a dominant role. Secondly, land becomes a not only commodity but also an asset that can generate wealth. Third, enormous land has been converted into urban uses for economic development, housing development, infrastructure provision etc. The fast depleting farmland, particularly quality ones, has been concerned by top leaders to maintain food security. Therefore, there is increasing tension between farmland protection and urban development. Fourthly, there is increasing pressure to pay large and adequate attention to property rights and individual (including farmers) interests. This, partly caused by increasing tension and conflict over land acquisition, will have profound impacts on land development.

With respect to urban development, relevant land policy reform in 1980s and 1990s can be distinguished from following three main frontiers: 1) introduction of market principles into land allocation and use; 2) using economic incentives to regulate or promote land use and land allocation decisions; and 3) conflict between emerging market forces and planning and management systems as well as challenges arisen from increasing recognition of individual rights and interests.
Concretely, privatization of economy and market development gave rise to enormous challenges and issues faced in land policy regime. The combination of transition toward market system that has been producing a dominating private economy and inherited institutional and legal frameworks create or imposes the following challenges centered on or around land. These policy challenges are:

1. How best to make land available in privatizing economy by maintaining public (state or collective) land ownership in both rural and urban areas, respectively;
2. How best to provide land for urban economic growth (this is an issue since it involves conversion of land ownership from collective to the state;
3. How best to protect national asset of land used by private hand while market principles are promoted to guide land use and allocation. This issue becomes of increasing importance since land now becomes a commodity and is able to generate enormous wealth;
4. How best to improve land use and land allocation;
5. How best to improve efficiency and effectiveness in planning, management, and development of land. Land policy reform aiming to address these challenges will be briefly discussed as follows.

Main responses in land policy regime are 1) Land Use Rights System; 2) Land Acquisition; 3) Land Banking; 4) Land Value Incremental Tax and Land Use Tax; 5) Farmland Protection Law; and 6) Land Administration Law.

1) Land Use Rights System.
In order to address challenges and issues of 1) and 2) mentioned in the previous session, a Land Use Rights System (LURs) modeling the Hong Kong’s public land leasing system was developed. In this public land leasing system, land ownership is separated from use rights so that use rights can be sold, trades, transferred, rented, and mortgaged in land markets (use rights markets) (Ding, 2003). Thus private firms can access the state owned land by purchasing land use rights either directly from the state or indirectly from others who are granted full use rights
by the state. This marks the first move in developing land markets and introducing price mechanisms in land use and land resource allocation.

The LURs defines two levels of markets. One is the transaction of use rights from the state or the state’s representative—local governments to users through auction, tender, or negotiation and the other is the transaction between users once access to use land has been granted by the state or state’s representatives. The former, called the first-level markets, is monopolized by the state and requires up-front payment for conveyance fees that are determined by location, grade, development density, type of use, and local amenity. Leasing term is usually 40-70 years, depending up use types. The latter, called the first-level market, is institutionalized to make land to be used by people who values the most within leasing term.

2) Land Acquisition
When socioeconomic development plans called for land development, municipal governments increased their land supply through land acquisition, a conversion of land ownership from the collective to the state. In these cases of land acquisition, the Constitution stipulates that municipal governments must compensate farmers’ for their land. Since there were no land markets, peasants were instead compensated with a package that included job offers in which farmers would work for the enterprises established on the acquired land, housing compensation referred to as resettlement fees, compensation for the loss of crops and belongings connected to the land, and urban residency licenses (hukou).

In the post-reform era, the compensation of compulsory land acquisition is primarily guided by Land Administration Law (LAL) that was first passed in 1986 and then amended in 1998. In 1986, the Land Administration Law followed the old module used in the planned system to guide land acquisition compensation. It contained four main components: land compensation,

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5 1986 Land Administration Law legalized private access to the state owned land. The Chinese Constitution was amended in 1988 to separate land ownership from land use rights. In 1991, the State Council announced “The Provisional Regulation on the Granting and Transferring of the Land Rights over State-Owned Land in Cities and Towns.” To provide concrete guidelines in implementation of Land Use Rights System (LURs) or the public land leasing system.
6 Prior to the development of the LURs, efforts of improving land use efficiency had been initialized. One of institutional changes was to change free land use system (tudi wuchang shiyong zhidu) to pricing land use system (youchang shiyong zhidu). Land use fees were imposed and later abolished once the LURs was introduced.
resettlement subsidies, compensation for young crops and attachments on land, and labor resettlement. Land compensation should be three to six times the average annual output value of acquired land in the preceding three years whereas resettlement subsidies should be two to three times the average annual output value. The sum of these two items should not exceed the 20 times the average annual output value of acquired land in the preceding three years.

3) Land Value Incremental Tax and Land Use Tax
Other policy instruments like Land Use Tax and land value increment tax were developed. The former act is to improve and rationalize urban land use, adjust land rent differentials, and improve land use efficiency.7 Tax liability is calculated by multiplying the size of land and tax rates. Land taxes and fees are neither differentiated spatially nor dependent upon land values. Although land use fees or taxes generated revenues for governments, the rates are so small, just reflecting land ownership.8

Land value increment tax is developed to In 1993, the state announced the "Provisional Act of Land Value Increment Tax on State Owned Land". It specifies that parties or individuals that transfer land use rights are the taxpayers. The act requires that taxpayers have to pay a land value increment tax if they gain net profits through land use rights transfer and the net profits exceed more than 20 percent of total costs (including land improvement costs, construction costs, management fees, transaction fees and taxes). Land value increment tax rates are flat but progressive.9

4) Land Banking

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7 The state announced the "Provisional Act of Land Use Taxation on State Owned Urban land" in 1989.
8 The general ranges of land use taxes per square meter per year are:
   - Large cities (more than one million population) charge 0.50-10.00 RMB;
   - Middle cities (between one million and half million population) charge 0.40-8.00 RMB;
   - Small cities (between 200,000 to half million population) charge 0.30-6.00 RMB; and
   - Towns and industrial and mining district (less than 200,000 population) charge 0.20-4.00 RMB.
9 Different tax rates are used in different sizes of cities. That is:
   - If the net profits are less than 50 percent of total costs, 30 percent of the net profits will be taxed away;
   - If the net profits are between 50-100 percent, the tax rate is 40 percent;
   - If the net profits fall in the range of 100-200 percent of total costs, the state charges 50 percent; and
   - If the net profits exceed 200 percent, the tax rate is 60 percent.
The institution of Land Banking was established in the late 1990s. The dual land markets were developed once land in previously administratively-allocated land entered land markets. All land that will be developed should first be purchased by centralized authority---usually called land banking center in municipal governments, which is responsible for land leveling and infrastructure provision. Developers or users should purchase land use rights from this center. Land that enters the Land Banking Center includes 1) newly acquired land from rural areas; 2) vacant land in cities; 3) reclaimed land from the state owned enterprises; 4) others. In design, here will be only one channel for developers to access land use rights. That is the Land Banking Center. The purposes of establishing the Land Banking Institute was to 1) control, manage, and promote land markets (the first level); 2) assist the state owned enterprises reform; 3) finance urban renewal and redevelopment.

5) Farmland Protection Law
Rapid urban expansion had caused the fast depletion of farmland, particularly in the urban fringes in which high quality and productive land is located. Between 1986 and 1995, farmland has lost 2,960 mu\(^{10}\) to non-agricultural construction (1996’ statistical yearbook). It is estimated, however, that the actual number can be 2.5 times higher (Li, 1997, pp:3). Survey using satellite image between 1986 and 1995 indicated that 31 big cities have expanded by more than 50 percent of their urbanized area (Li, 1997). Consequently, urbanized areas increased from 9,386 square km in 1985 to 17,940 square km in 1994, a 7.5 percent rate of annual growth.\(^{11}\) Although China is the third largest country in the world in terms of the size of its territory, its per capita farmland is well below the world average. In 1995, world average per capita farmland was 3.75 mu whereas it was 1.75 mu in China. The rapid reduction of farmland has alarmed top officials because "self-reliance" in agricultural goods has been among the top priorities in the national economic development agenda for the concern of social stability.

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\(^{10}\) One mu equals 0.1647 acre.

\(^{11}\) An investigation on 24 large cities indicated that urbanized area grew at 3.4 percent annual rate whereas urban population 2.6 percent from 1950-1980. The rates were 4.5 percent and 2.3 percent for urbanized area and population respectively, from1980-1995.
The state council passed the "Basic Farmland Protection Regulation" in 1994 in order to protect farmland. In doing, Chinese central government hopes that agricultural goods will be self-sufficient. The regulation prohibits basic farmland from conversion to non-agricultural activities and mandates that counties and townships designate the basic farmland protection districts in accordance with provincial farmland preservation plans. The basic farmland protection districts are divided into two levels. The first level consists of high quality farmland with high productivity and cannot be converted to non-agricultural uses in the long term. The second level consists of good quality farmland with moderate high productivity and cannot be converted to non-agricultural uses in the planned periods (usually 5-10 years). The designation of basic farmland protection has to be approved by higher level of authority and is protected by the law.

6) Land Administration Law
The New Land Administration Law (1999) may have far-reaching influences over land development and urban form (Valletta 2001). This law intends to protect environmental and agricultural lands, to promote market development, to encourage citizen involvement in the legislative process, and to coordinate the planning and development of urban land. The law clearly defines the rights and responsibilities of citizens, enterprises and governmental agencies (Valletta 2001). The law has two important clauses that may be most influential. Article 33 of the law mandates no net loss of cultivated land over time. It stipulates that people’s governments should strictly implement the overall plans and annual plans for land utilization and take measures to ensure that the total amount of cultivated land within their administrative areas remains unreduced. If governments within their administrative boundaries can not reclaim the same amount of farmland lost to construction due to lack of land reserves, they have to either reclaim land in other areas or pay costs of reclaiming land in other areas.

Article 34 of the law requires that capital farmland shall not be less than 80 percent of total farmland land in provinces, autonomous regions and municipalities directly under the Central

12 Basic farmland consists of
- Agricultural production bases (such as crops, cotton, eatable oils, and other high quality agricultural products) approved by governments;
- Farmland with high productivity, good irrigation, and that have been exploited;
- Vegetation production bases for large and middle cities; and
- Experimental fields for science and educational purposes.
Government. It reinforces “The Basic Farmland Protection Regulation” passed in 1994. Thus it becomes extremely difficult to carry out non-agricultural construction in cultivated land. Fast depleting of agricultural resources due to massive encroachment, limited agricultural resources, and concern on self-reliance in crops were credited for these tough measurements for farmland protection. China was successful in feeding its 1.3 billion populations (21% of the world total) on 7% of world’s farmland. In 1995, the world average per capita farmland was 3.75 mu whereas China had only 1.8 mu,\textsuperscript{13} less than the half of world average (Li 1997a).

5. Urban Development

5.1 Urban Land Use
The following trends of land use have been widely observed in many Chinese cities. The first one is related to the fact that capital density increases rapidly. It is interesting to see that population density changed little if any, unlike an increase in floor area/land ratio. This is mainly because 1) Chinese cities are over-crowed, particularly in cities’ centers 2) the strict preservation of farmland constrained developers in existing urban areas where vacant land is slim so that redevelopment are prevalent; and 3) socioeconomic development contributes rising consumption of floor space per capita.

The second remarkable trend is reflected in the reduction of industrial and warehousing in central locations and rising sharing of commercial and office space. However, by international standards, Chinese cities contain still a large amount of industrial share (from 20 to 40% of built-up areas, as compared to 6-10% in industrialized countries). Not surprisingly, massive infrastructure provision launched to improve investment environment and address much-needed for urban functioning lead to an increase in infrastructure share and improved street conditions and network accessibility.

As expected, the land use rights system helps to improve land use efficiency. Before the land use system reforms, 3-5 percent of industrial land in cities was unused. Industrial land accounted for 40 percent of total urbanized areas in some cities. This means that are 20 percent idle land.

\textsuperscript{13} One \textit{mu} equals to 666.67 square meters.
After the land use reforms, urban vacant land is declining and urban land use patterns are reshaping. Commercial and residential developments outgrew industrial use and low-value added activities moved out of central locations, and replaced by high value added activities such as retail and commercial businesses. In Shanghai, for instance, land rents begin to influence land use pattern. Office space, commercial, and public uses dominated the central location whereas industrial use was kept far away from the CBD (Wu, 1997). The imposition of land use fees or taxation provided an economic incentive for Dan Weis to return unused land that has been allocated free of charge. In Fu Shuen City, for instance, unused land of 250,000 square meters was returned to the government in 1985.

5.2 Urban Renewal and Redevelopment

The impacts of sales of land use rights on municipal governments are numerous. The sales of land use rights account 25-50 percent of cities’ revenues. Guang Hai City in Si Chuan province, for example, collected 10 million RMB annually, which is 25 percent of its total city revenues in 1994. Dun Huang City, Gan Su province has more than 40 percent of revenues from the sale of land use rights. Shanghai City has been collecting more than 10 billion RMB annually since 1992 whereas Guang Zhou province has more than 20.5 billion RMB from the sale of land use rights (Yang and Wu, 1996). The local governments’ revenues will be multiplied if indirect impacts, such as employment and backward and forward linkages, of land development are taken into account.

“Extra” or “off-budget” revenues enables local governments to conduct large-scale infrastructure provision and neighborhood redevelopment, particularly in city cores in which infrastructure is insufficient or lack and many dangerous houses are located (Zhu, 1999; Yeh and Wu, 1996; Li, 1992). Fu Zhou City, for instance, has collected 2 billion RMB from the sale of land use rights between 1987 and 1993 and used them to construct urban infrastructure and housing. It has raised per capita housing consumption from 3.98 square meters in 1980 to 8.2 square meters in 1993. Houses with all utilities (gas, electricity, sewer, water, and telephone) increased from 24.43 percent in 1985 to 53.85 percent in 1993 (Yang and Wu, 1996).

5.3 Housing and Real Estate Development
Total investments in real estate and housing construction in 1994 were 188.13 billion RMB, a 43 percent increase compared to the previous year. All of these contribute to the rapid urban expansion experienced in many cities, particularly large cities in China.

Figures 3-7 illustrated the rapid development of housing construction, particularly for commercial housing as well as housing privatization since 1992. Around 30% houses sold were purchased by private entity in 1991. That number jumped over 70% in 1998. Now more than 80% of housing stocks is in private hands (Figure 3). Less than 4 billion square meters of commercial housing were sold in 1992. In six years, total square meters of commercial housing sold were nearly 11 billions, almost increased by 200% (Figure 4 and 5). Since 1991, private entities have been playing increasing roles in housing construction whereas Danweis decreasing their contributions gradually and in a significant way, which was objective of land and housing reforms. Another way to look at the housing and real estate development is to examine the housing investment. Figure 6 shows that total capital investments in commercial housings increased exponentially since 1992 (up to 1999, as data show, but the trend continues until middle of the first decade of 21 century). As expected, total revenue from real estate development rose exponentially as well (Figure 7).

5.4 Urban Spatial Expansion
Land used for urban development is primarily amassed through land acquisition. A survey of sixteen provinces revealed that land acquisition was the main source of the land supply. In a two year span from 2000 to 2001, 75% (2.47 million mu out of 3.27 million mu.) of the land used for construction was acquired by the government. More than 52% of construction took place on cultivated land (Investigating Group of Land Acquisition Reform of Ministry of Land and Resources, 2003).

Land acquisition policies and practices have also spurred urban spatial growth. Shenzhen grew from a small village less than 3 km² in 1979 to a modern city of more than 140 km² in 1999 (Table 3). Yantai City of Shandong province increased its built-up areas by nearly 200% from 2001 to 2004 (the built up area increased from 120km² to 340km² in the period). Chongqing’s urbanization rate increased from 18.99% in 1996 to 28.5% in 2000. Correspondingly, urban
built-up areas increased from 158 km² in 1994 to 175 km² in 2000. Beijing’s urbanized areas increased nearly 30% in the 1990s, and per capita construction space rose by two-thirds. Guangzhou expanded by 7 to 8 km² per year in the second half of the 1990s. Hangzhou expanded its built-up areas from 430 km² in 1987 to 683 km² in 1997.  

Rapid urban spatial expansion is the result of several policies. Government efforts to improve the housing stock have boosted housing and real estate development. Infrastructure development has occurred beyond the city core and provides incentive for development to expand into rural areas. Nevertheless, enormous ability of land acquisition in revenue collection in short term provides strong economic incentives for local governments to convert as much land as possible. Hence, such myopic behaviors of local government officials are not surprising at all. Finally, combination of land acquisition and public land leasing generate much needed finance resources for urban expansion. Land leasing and loans by local governments using land as collateral take 50-80% of total investments in urban infrastructure and public services along costal areas.  

5.5 Local Government’s Fiscal Strength

One of the most prominent impacts that land acquisition and public land leasing had created was the creation of a new revenue stream for local governments. This phenomenon is related to the 1993 tax restructuring, one of the institutional responses to the rapidly transforming society. There are three outstanding characteristics or outcomes of the tax reform (Bahl, 1997). One is the adoption of income tax. The second is the streamlining of taxes levied on enterprises representing a simplification and reduction of the redundant value added taxes (VATs). The last feature is associated with changes in the landscape of inter-governmental relationships. Responsibility for urban and public services was shifted from the central government to local governments.

15 Data was collected and compiled by the author from interviewing local officials from Zhejiang, Jiangsu, Guangzhou, and Henan Provinces.
This measure was successful in improving the central government’s fiscal condition. However, the revenue share for local governments was not increased at a level commensurate with their increase in responsibility. Consequently, many local governments face increasing budgetary deficits. It is reported that more than one third of county level governments have serious budget problems and over half of the local governments directly below the provincial level have budgets that merely covers the operations of public entities.\textsuperscript{16}

One of the means by which local governments increase revenues is through public land leasing. Land use conveyance fees represent one component of the public land leasing system that has played an important role in local government finance. For instance, Hangzhou City, the capital of the Zhejiang Province, is among the 15 largest cities in China. It had 3 million city residents in 2001. Among them, 400,000 were floating population (China Daily, 2001). It is also ranked second in terms of GDP among provincial capital cities in 1998. Land conveyance fees were more than six billion YMB in 2002, more than twenty percent of the total municipal government’s revenues. The ability for local governments to raise enormous revenues from limited market land use rights transactions is partly because land conveyance fees represent lump sum, up-front land rent payments for a leasing period and partly because local governments exercise their strong administrative powers to require that farmers sell their land at below market rates and resell the land at market rates. The purchase price could be more than 100 times less than the resale price. After considering the costs of land improvement, net revenues may be ten times the total cost of the land.

For instance, in one village in Fujian province, the local government paid about 10,000 RMB per mu to farmers and resold to developers for 200,000 RMB per mu if zoned industrial or for more than three-quarter million RMB per mu if zoned residential (Investigating Group of Land Acquisition Reform of Ministry of Land and Resources, 2003). In the Jianggan district of Hangzhou, land compensation and resettlement subsidies were 120,000 RMB per mu from 1997 to 1999 and then were raised to 160,000 RMB per mu after 1999. The average price of land use rights for housing projects was 2 to 4 million RMB per mu (Xu, 2003). In 1992, the Pudong

Development Commission paid farmers 20,000 RMB per mu and then resold the land to developers and investors for at least 300,000 RMB per mu. Assuming that only half (300 km²) the Pudong district areas (584 km²) is zoned for development and net profit of land development per mu is 200,000 RMB, this means that the Pudong Development Commission collected more than 90 billion RMB (Chen, 2002).

Land conveyance fees have been steadily increasing in the 1990s, and the financial impacts of land acquisition and development are enormous. Local governments mainly relied on land to finance urban construction. Revenues generated from land can account for up to 60% of total fiscal incomes of local governments (Investigating Group of Ministry of Land and Resources, 2003). Clearly one of the main reasons for many local governments to function and support many initiatives under fiscal deficits is because land has provided much needed financial resources.

In addition to the conveyance fees, local governments also collect various taxes associated with land acquisition. These taxes include farmland occupation tax, land management fee, vegetation development funds, public service project development fees, land use right fees for newly added construction land, and agricultural tax. These taxes and fees can account for up to 45 to 55% of total costs of land acquisition and are a significant funding source for governments (Table 2).

5.6 Industrial and Economic Development

In addition to providing financial resources to local governments, public land acquisition is associated with cheap land costs and economic incentives such as tax exemptions and reductions in land revenues. These incentives and programs have been the main driving forces for the development of economic and industrial development zones. By the summer of 2004, there were 6866 zones across the country, covering more than 38,600 km² (Cao, 2004). In order to compete for investments and businesses, many zones offer investors free access to land use rights or at a much lower prices than the actual costs. In return, development zones are rewarded with taxes and employment that indirectly stimulate local economic development.
Economic development zones experienced much faster growth than the national average. For instance, the average national GDP growth rate of economic development zones was 25.7% in 2001 (45 zones) and 29.4% in 2002 (49 zones), respectively. Their growth rates were two to three times the national average growth rate in the same period. The import and export values and industrial outputs in these zones also exhibited the same patterns of faster growth.17


6.1 “Hidden” Land Markets

"Hidden" or "invisible" land markets are active across Chinese cities. The common formats of these hidden land markets are (Yang and Wu 1996):

1. Transfer land-use rights through housing sales and rents;
2. Rent or sell unused land, which was obtained free of charge;
3. Transfer land use rights in exchange for housing and other commodities;
4. Obtain stock shares by granting land use rights; and
5. Transfer land use rights through mortgage, merging, and restructuring of state-owned enterprises.

The creation of these hidden land markets is partly driven by huge profits and partly evolved out of loopholes in land regulations and land laws. These hidden markets have caused substantial revenue losses to the state and local governments; adversely affected urban development; increased social inequality and corruption, triggered land opportunism; and distorted land markets (Ding, Knaap, Wu, 2001; Li and Walker, 1996, and Chan, 1999). Fu Shun City, for example, lost 13 million RMB from land revenues annually whereas Chong Qi City loses 13 millions RMB in its 9 square km central area in 1992 (Yang and Wu, 1996).

17 Data sources:
http://www.fdi.gov.cn/common/info.jsp?id=ABC00000000000003475;
The coexistence of land allocation systems creates the so-called double-track system when the LURs is adopted and at the same time the old land tenure system also works. That is to say that there are two channels through which land use rights can be obtained. One channel is to obtain land use rights without payment and the other is to buy land use rights from the state or other parties (Xu, 1994; Yeh and Wu, 1996; Badcock 1986). Although the law prohibits the entry of land allocated free of charge into land markets, many units illegally participate in land markets by renting and transferring land use rights to a third party and gains windfalls land values. It is very profitable for people and parties to bribe government officials to obtain land use rights and then resell to developers. As a result, the double track system is blamed for increasing bribery and corruption throughout the country (Zhu 1994, Li 1997, and Chan 1999).

6.2 Spatial Land Use Patterns

The “Farmland Protection Law” and the “Land Administration Law” protect farmland in order to maintain self-reliance in crops. In this regard, the laws may have achieved its designed goal. These regulations, however, have negative impacts on urban land use and urban development. Ironically, the farmland protection law will create urban villages that are surrounded by urbanized areas because it prohibits land development in quality farmland regardless its location and economic values for other land uses. The practice of farmland protection law may yield two consequences. One is that urbanized areas are spatially discontinuous, which in turn increases commuting costs. The other is related to fact that incompatible land uses are spatial mixed together, which in turn reduces housing and land values. Moreover, the protection of quality farmland limits site choice for economic activities. Thus, sites allowed for development may have locational disadvantages and are not economically profitable comparing to sites that are prohibited. Given the fact that the majority of land in urban fringes, particularly along coastal areas, is of quality, their protection just pushes economic establishments further away from the commercial centers, raises transportation costs, reduces economic profits for urban establishments, and make cites less competitive. Externalities resulted from complexity of urban systems are not well understood among Chinese scholars and officials, unfortunately.

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18 The old land tenure system still applies to public organization/institution, state, or military agencies; urban infrastructure and public projects; key industrial sectors (energy, transportation, and water conservancy facilities/
Land is one of the largest elements in land development cost equation. In Beijing, land costs account for 30-40 percent of total land development costs if it is developed on farmland and even up to 60-70 percent if it is developed on existing urban areas. For instance, the cost share of land is 60.8 percent in old districts and 33.8 percent in farmland, respectively (Wang, 1997). Cheaper land in urban fringes attracted many developers and had contributed massive construction, which then caused rapid decline of farmland.

These laws may help to slow down the encroachment into rural areas through both regulative and economic tools. Economically, the “New Land Administration Law” inevitably increases land development costs by adding a new element—farmland exploitation fees—into cost equation. Given the fixed land supply and continuous urban growth, marginal cost of farmland exploitation fees will rise exponentially. Rising development costs will cause housing prices increase and consumers will suffer eventually. In addition, real estate developers will also suffer from rising development costs and urban development will be scaled down (Brueckner, 1997). These policies and/or regulations will increase urban density and promote urban compactness. Difficulty in horizontal expansion provides an opportunity for vertical development, which usually means urban redevelopment and urban renewal. Unfortunately, there are not systematical policies that promote urban renewal across Chinese cities.

6.3 Social Conflicts and Injustice
There are two major types of social conflicts arising with the land policy reforms. One is a conflict between urban governments and peasants in the urban fringes and the other is a conflict among peasants in the urban fringes. The former conflict arises because governments want to control land development whereas peasants want to develop land to gain huge profits from it. The latter conflict arises when land development is prohibited on quality farmland by the law so that peasants will be deny economic wealth associated with land development whereas land development on non-basic farmland is allowed so that their peasants are able to make huge profits. The profit difference between farming and land development is so huge that if there is not income transfer program, peasants on basic farmland will be significantly economically disadvantaged compared to peasants on non-basic farmland. Thus, without income transferring,
the law virtually punishes good citizens who obey and positively response the governments’ calls.

According to Ding (2005), increasing social conflicts and injustice to a large degree are attributed to the practice of land acquisition yields injustice and unfair compensation, which is explained by:

1. Lack of neither market data nor price mechanism makes it difficult, if not impossible to untrained staffs to appraise the value of farmland. Alternatively, a formula was developed to assess compensation and was fully of shortcomings (Ding, 2005).

2. Administratively determined price-disequilibrium of between agricultural and industrial goods makes a compensation equivalent of 200-300 times the value of annual profits from farmland less attractive and appealing (Ding, 2005) and potential high inflation rates can easily wipes out lumpy sum compensation. Therefore, long-term life support for lost farmland farmers will be a big challenge.

3. It makes it worse while the LAL institutionalizes different compensation levels based on types of projects on taken land from farmers. Compensation can vary by tens times (Ding, 2005).

6.4 Are Economic Incentives effective to Affect Land Use and Land Allocation Decision?

Many economists prefer utilization of taxes and price mechanism in directing urban spatial growth and land use decision. Clearly this type of argument has its own merits, particularly along the line of Henry George’s theorem that land taxation is efficient and effective mainly because it does not distort markets while it can promote land use intensity as well as discourage land idling.

The land tax system in China, however, cannot perform these functions but can partially finance local government. This is because private land ownership does not exist and land taxes are not based on value. Rather, land taxes merely reflect land ownership. According to the way in which land tax rates are set up, total land taxes and land use fees depend on the size of land used. This uniform land tax may produce injustices, which arise when some users pay high land taxes but receive/enjoy lower level of public services whereas others can enjoy high level of public services even though they pay lower land taxes.
It is also difficult and expensive to collect land use taxes because of lack of land registration and trained staff. This partly explains why revenues generated from land use taxes have not met expectations. The state expects land use taxes to generate 10 billion RMB revenues annually. However, they have only collected 2.5 billion RMB from 1988 to 1990, far below the expected amount (Yang and Wu, 1996). Overall, it is too early to conclude that the land taxation system in China has achieved the predetermined goals: to rationalize land use allocation, improve land use efficiency, and adjust land use structure.

6. Final Remarks and Conclusions

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Transformation to Market System

Pre-Reform Period

Economy

Public Economy
- Dominating
- Neglecting

Private Economy
- Very small (<10%)

Land

Public Economy
- Important
- Privatization
- Transformation

Government
- Reform

Land Supply
- How to provide land?
- How to address F.S.

State
- Cities and Towns

Land Acquisition
Ownership Conversion
Tension and Conflict

Planning & Market

Collective
- Rural Areas

Note: F.S. = Food Security

Figure 1: Institutional Arrangement on Land in Pre-Reform Period

Figure 2: Institutional Arrangement on Land in Pre-Reform Period
Figure 1: Proportion of Private Purchases to Total Floor Space of Sold Commercial Housing

Source: China Statistics Yearbook, 2000 (Retaken from Song, Knaap, Ding, 2005)

Figure 2: Total Floor Space of Sold Commercial Housing

Source: China Statistics Yearbook, 2000 (Retaken from Song, Knaap, Ding, 2005)
Figure 5: The Sale of Total Property and Commercial Housing in China

Source: China Statistical Yearbook 2000 (retaken from Zhang, 2005)

Figure 5: Investment in Capital Construction in China (100 million RMB)

Source: China Statistical Yearbook 2000 (retaken from Zhang, 2005)
Figure 7: Real Estate Development in China (10,000 RMB)

Source: China Statistical Yearbook 2000 (retaken from Zhang, 2005)