

Emerging Land & Housing Markets in China



Edited by Chengri Ding and Yan Song

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Urban Land Policy Reform in China's Transitional Economy

CHENGRI DING AND GERRIT KNAAP

The People's Republic of China has achieved remarkable progress in socioeconomic advancement and in political and administrative reforms during the quarter century since 1978. The twin engines of policy reform and unprecedented economic growth have spurred dramatic changes in land development. Alongside fundamental economic changes aimed at a gradual remodeling of the Chinese system as a free market economy, government has carried out an extensive program of land policy reform. With the many positive outcomes associated with these renovations have come problems that are best understood in an historical context. Hence, this chapter provides an overview of land policy prior to 1978 and policy changes since that time. It evaluates the socioeconomic impacts of reform, summarizes issues and challenges faced by policy makers in China's transitional economy, and concludes with a summary of findings and an agenda for future research.

Land Policy: 1949–1978

This section offers a picture of the infrastructure and dynamics of land policy in pre-reform China by reviewing issues of land ownership, land allocation, land supply, land development and spatial land use patterns.

Land Ownership

Before 1949, land was privately owned and could be transferred legally through mutual agreement. A household's wealth corresponded closely to the amount of land it possessed. After taking over the country in 1949, the Communist Party immediately launched a land reform called *tugai*, with the goal of reducing or eliminating social inequality. This was accomplished by confiscating land from the rich (landlords) and redistributing it to the poor. Later, China initiated a series of political movements such as the "big leap" (*dayuejin*) and "people commune" (*ren min*

gong she).¹ In rural areas, peasants joined communes (“production cooperations”) by donating their assets, including land and large production materials that had been distributed to them under the previous land reform (*tugai*). This led to the formation of a collectively owned land system that has not been changed since. In urban areas, the state simply confiscated land and declared state ownership. By 1958, land in cities and towns was generally state owned whereas farmland was collectively owned (Yang and Wu 1996; Zhang 1997; Zhao, Bao, and Hou 1998).² Private land ownership virtually disappeared and the Chinese Constitution banned land transactions. Thus, land markets vanished and land neither was a commodity nor had value attached to it.

Land Allocation

In urban areas, the state owned the land and allocated it — through the issuance of land use rights — to socioeconomic units, called *danweis*, free of charge for an infinite period of time. A *danwei* was a basic unit of social fabric that functioned dually: as an administrative structure for organizing the society and the economy, and as a political tool for inculcating the socialist collective ethic. A *danwei* was responsible for both production activities and housing of its members. Because these *danweis* were either state owned or collectively owned, land use rights and land ownership were legally inseparable. That is, the state owned the land, whereas *danweis* were granted land use rights for an infinite time period, but were not allowed to transfer land use rights to a third party. Although laws required that *danweis* should return unused land to the state, this seldom happened because land had no value and there were no economic incentives to return it. Land allocation depended largely on the political powers to whom a *danwei* was connected, as well as on the political atmosphere in which socioeconomic function and production were planned and organized (Wong and Zhao 1999; Li 1997).

Land Supply

Municipal governments increased their land supply through land acquisition, which meant a conversion of land ownership from collective to state ownership. The Constitution stipulated that municipal governments had to compensate farmers’ losses. Because there were no land markets, peasants were instead compensated with a package that included job offers (farmers would work for the enterprises established on the acquired land), housing compensation (resettlement fees), compensation for the loss of crops and attached belongings on the ground, and granting of an urban

1 The “people commune” movement was divided into three stages, referred to as primary production cooperation, advanced production cooperation and people commune.

2 There were exceptions, such as natural resources (e.g., forests, bodies of water, or minerals) that were owned by the state.

residency license (*hukou*). Although peasants were not paid market prices, they were willing to give their land to the state because, in exchange, they would be granted the hukous that made them eligible for the social welfare services — medical insurance, pension and retirement plans, high-quality schools and subsidized agricultural goods — that were available only to city residents.

Land Development

Under the central planning system, governments were in charge of establishing short-range (one-year) or middle-range (five-year) socioeconomic development plans that would lay out specific economic growth goals (measurable mainly by industrial outputs). After examining existing capacities, governments determined the level of capital investment and improvements required to achieve their socioeconomic goals. Land development was centered in project planning (*xiang mu gui hua*), a process in which land input was the last factor considered. This kind of practice was responsible for substantial amounts of unused land, particularly in industrial sites. These unused lots, obtained free of charge, later entered land markets, causing land market distortion and governments' loss of these state assets. The lack of a land registration system made it difficult to monitor land in administratively allocated parcels and to supervise land development.

Spatial Land Use Patterns and Land Use Structure

Empirical studies have shown an extreme concentration of population in Chinese city centers (Bertaud 1992). This pattern has allowed cities to function with a minimum of investment in urban infrastructure. The concomitant lack of exurban infrastructure helps explain the intensive settlement in central locations, and represents an obstacle in resettling households to the outskirts of cities. Features of this urban compactness include the low per capita consumption of floor space and the prominence of bicycle transportation. In the course of economic reforms, this pattern has not been challenged or changed. The high population density in cities may be seen by planners as a benefit rather than a problem because it not only helps to preserve farmland by preventing rapid urban encroachment into rural areas, but also reduces automobile traffic and commuting time.

During the pre-reform era, industrial use was traditionally one of the dominant land use categories in most Chinese cities, accounting for 20–30 percent of the land, including storage facilities (Ding 2003).³ Residential use accounted for less than

³ Rapid urbanization and massive restructuring, particularly in cities like Beijing, have altered this pattern. The Beijing municipal government is launching a massive plan that will relocate industrial establishments to the outskirts of the city's urbanized area in order to improve the environment for the 2008 Olympic Games. As a result, industrial share is expected to decline dramatically. Few Chinese cities, however, are able to launch such a massive industrial relocation.

TABLE 1
Land Use in Major Chinese Cities by Type, 1991
 (as percent of total land use)

	Residences	Industry	Infrastructure ¹	Greenspace	Special Uses
Shanghai*	49.63	30.54	7.28	0	12.55
Beijing*	39.05	20.11	5.54	0	35.30
Tianjin	26.07	35.04	29.56	4.27	4.27
Guangzhou*	35.94	37.00	17.12	0	9.94
Shenzhen	59.86	22.12	14.09	3.02	0.42
Shenyang	29.56	27.95	23.80	6.89	11.79
Chongqing	34.04	33.41	26.99	3.12	5.44
Wuhan	26.84	30.38	24.96	7.00	8.75
Zhenzhou	25.51	28.26	37.76	7.89	0.57
Nanjing	36.79	23.08	9.55	1.85	28.73
Hangzhou	36.17	29.89	15.78	14.94	3.21
Kunming	28.69	23.06	38.47	3.08	6.70
Taiyuan	20.96	26.73	32.83	19.47	0
Xi'an	44.51	29.31	25.91	0.08	0.16
Harbin	38.01	26.34	26.61	6.64	1.84

*Shanghai, Beijing and Guangzhou did not survey greenspace.

NOTE:

1 Infrastructure includes public services, transportation, etc.

SOURCE: Nanjing Institute of Geography and Lake Study (1999)

50 percent of all urbanized land.⁴ The share of industrial use in planned economy countries was more than twice that in industrialized countries (Bertaud and Renaud 1992). By comparison, industrial use accounted for only 4–10 percent of built-up areas in most market economy cities (Hong Kong: 5.3 percent, Seoul: 6 percent, and Paris: 5 percent) (Bertaud 1992).

China's land use patterns were consistent with its national policy, which, in the early stage of the Communist Party's regime, was set to achieve rapid industrial growth, even at the expense of other sectors such as agriculture and housing. Industrial goods were overpriced while agricultural goods were underpriced. This pricing difference, called *jia ge jian dao cha*, was administratively created and, at one time, influenced the whole nation with its propaganda of "*sheng chan di yi, sheng huo di er*" ("production first and living second"). Consequently, urbanization did not keep pace with industrialization at the rate that industrialized countries had experienced. This explained the substantial proportion of transient urban population that moved temporarily to wherever jobs were available. The housing and retail sectors were far behind industrial sectors, particularly heavy industry (Dowall 1993). In comparison to developed countries, land was overallocated to industry but underallocated to the housing sector. (For an overview of land use structure midway in the reform era, see Table 1, above.)

4 According to Li (1999, 20), residential land accounted for approximately 23 percent in Shanghai, for instance.

Land Policy Reform: 1978–Present

The primary, and compelling, reason for ongoing land policy reform in China is the increasing tension between land supply and the population's need for land, as illustrated through the following facts.

- Population density is high, particularly in eastern China. Henan province, for instance, has only 167,000 square kilometers (1/60 the area of the United States), but hosts a population of more than 100 million (more than 1/3 that of the U.S.).
- China feeds more than 20 percent of the world's population on less than 7 percent of the world's farmland. Its per capita farmland (1,167 square meters) is half of the world average (2,333 square meters).
- Land resources are extremely limited, compared with population. More than 20 percent of land (e.g., deserts and land covered by glaciers and/or snow) is unusable for any purpose; mountainous areas comprise another 30 percent of China's territory. In these areas, agricultural productivity is low, land development costs for urban uses are high and accessibility in general is low. All human activities — economic growth, infrastructure development, environmental and ecological protection, housing and recreation, etc. — demand and compete for land, creating pressure to manage and allocate land in efficient and effective ways.

Land use systems in China have evolved gradually during the last two decades to manage the competing pressures on land through improvement in land management and land use efficiency. Changes include the adoption of a system of land use rights, land use fees and taxation, farmland protection and regulations on urban growth (Liu and Yang 1990; Tang 1989; Zhang 1997).

Land Use Rights

The old land tenure system was first challenged when China adopted its famous “open-door” policy in 1978. The policy not only ended China's decades-long political isolation from the West, but also changed the political and economic environments. Since then, foreign direct investment and the number of joint ventures with foreign companies have increased exponentially. For instance, foreign direct investment totaled only \$18.2 million in 1978, but increased to \$452.6 million in 1997. The surge of foreign businesses challenged the land use tenure system by demanding access to land use rights (Jiang, Chen, and Isaac 1998). The old land allocation system also conflicted with the ultimate goal of economic reforms that attempted to introduce market mechanisms to improve economic efficiency, correct government failures in land allocation and minimize negative consequences of the land tenure system.

In the early stage of the Chinese transitional period, any effort to reform ownership would provoke vigorous political turmoil. Because public ownership had been the cornerstone of communism and socialism, efforts to change that system faced persistent political resistance from citizens and officials. China addressed this challenge by establishing “special economic development zones” (SEDZs) along its east-coast areas in the early 1980s to attract foreign investment.⁵ In these zones, businesses and enterprises enjoyed special policies not available to other geographic areas.

These special policies included access to state-owned land through the separation of land use rights and land ownership (this developed into the land use rights system [LUR], discussed later) and economic development incentives such as tax exemption. The prototype of the LUR, similar to the land leasehold system in Hong Kong, was first developed to accommodate the needs of foreign direct investment. It allowed foreign investors to access land by leasing to them land use rights for a period of time, while the state retained ownership of the land. For this, investors had to pay lump-sum land use rights fees. This early reform in the land tenure system marked a new era of land use policy in modern Chinese history. For the first time, land use rights and land ownership were separable, although this practice was limited to the SEDZs.

Driven by the success of the SEDZs, the Chinese government passed the first Land Administration Law (LAL) in 1986 to institutionalize the LUR nationwide.⁶ The 1986 law was at odds with the Chinese Constitution, which banned selling, leasing and transferring of land, so the Constitution was amended in 1988 to clear away any legal barriers to land market development. The 1988 amendment did not change land ownership, but allowed the free transfer of land use rights between land users. As a milestone in the evolution of the Chinese Constitution, the 1988 amendment is significant, because it allowed the state to maintain ownership and at the same time promoted land market development without provoking political turmoil.

To provide concrete legal guidance, 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 (Provisional Regulation), which established two kinds of land transaction (Hu 1990). One defines the “first” level land market, wherein a municipal government, as a representative of the state, *sells* land use rights to buyers for a fixed period through auction, tender or negotiation. The *transfer* of land use rights defines the “second” level land market. In both markets, the price of

5 Initially, there were four special economic development zones: Shenzhen, Shantou, Xianmen and Tianjin. Later, the initiative included eight more, for a total of twelve SEDZs, which were the sites of many policy experiments. Critics of the program charged that it was policy advantages, rather than comparative advantages, that contributed to the rapid growth in these SEDZs. After more than 10 years, policy advantages enjoyed by these SEDZs vanished.

6 The original, 1986 Land Administration Law (LAL) was later amended (in 1988) and implemented in 1991; throughout this volume, this amended version is referred to as the 1988 LAL. Another, revised LAL was adopted in 1998 and implemented 1 January 1999. See Valletta, Chapter 3 in this volume, for more information on the evolution of China’s land administration laws.

land use rights depends on land use type, location and density, and on neighborhood externalities. This approximates the way land prices are determined in Western countries, although in China land markets are far from mature (Ding 2003).

The state intends to control land markets through its monopolization of the first-level land markets (that is, through the monopolization of land supply), but is not involved in the transfer of land use rights except for land registration, legal protection and taxation (Liu and Xie 1994; Walker and Li, 1994; Liu and Yang 1990). According to the Provisional Regulation, sale of land use rights means the process by which the state, as landowner, sells land use rights to land users for a specific time period that varies from 40 to 70 years, depending on the types of land use.⁷ The sale of land use rights takes the forms of negotiation, tender and auction. Municipal governments act as representatives of the state to sell land use rights and share land revenues with the state. Since land use rights prices vary with the different types of land use, the law requires that the price should be adjusted if the land use changes. To protect the state's land assets, the law mandates that municipal governments have the first rights to buy back land use rights if the price to transfer those rights is significantly below market price. The Provisional Regulation also stipulates that land users who obtain land free of charge through administrative allocation must pay land use taxes. The law prohibits the transfer, lease and mortgage of land use rights obtained free of charge through administrative allocation.⁸

In summary, the objectives and goals of land use rights reforms are to improve land management through land markets instead of administrative channels; improve land use efficiency; make land an important asset that has value attached to it; increase government revenues; manage supply and coordination of land development throughout the country; and preserve farmland and control of illegal conversion from farmland to urban land (Zou 1994).

Land Use Fees and Taxation

In 1989, the state passed the Provisional Act of Land Use Taxation on State Owned Urban Land, meant to improve and rationalize urban land use, adjust land rent differentials, improve land use efficiency and enhance land management.⁹ According to the law, all work units (danweis) and individuals were obliged to pay land use taxes or fees if they used land in cities, towns, or industrial and mining districts. The

7 Terms for different uses include 70 years for residential use; 50 years for industrial use; 50 years for education, science and technology, cultural, health and sports uses; 40 years for commercial, tourist and recreation uses; and 50 years for other uses.

8 However, there are exceptions. If one of the following conditions is met, land acquired free of charge through administrative allocation can be transferred, leased and mortgaged. A land user must be a company, enterprise, economic entity or individual; have obtained a land use rights license for state-owned land; have legal documents of property ownership of structures and attachments on the property; and/or have paid land use rights prices according to regulations for land use rights selling of state-owned land.

9 A land use tax is also called a land use rights assignment tax.

rates of land use taxes depended on city size and land use types. Total land taxes or fees were calculated by multiplying the size of land parcels by the applicable tax rates. Land taxes and fees were neither differentiated spatially nor dependent on land values. Although land use fees or taxes generated revenue for governments, the proceeds were so minimal that they barely reflected land ownership.

In 1993, the state passed the Provisional Act of Land Value Increment Tax on State Owned Land. It specified that parties or individuals that transferred land use rights were the taxpayers. The act required taxpayers to pay a tax on increases in land value if their net profits from such transfer exceeded more than 20 percent of total costs (including land improvement costs, construction costs, management fees, and transaction fees and taxes). These tax rates were flat but progressive.

Benchmark Land Use Rights Price System

Immediately after the adoption of the LUR, the first real challenge faced by local scholars and officials was determining land prices. Lack of experience and market data made it very difficult. To overcome the problem, a benchmark land use rights price system was developed in the early 1990s to guide the granting and transferring of land use rights (Hu 1990). Its four components are: a land use rights fee paid to the government; infrastructure costs paid to the government for land improvement; demolition costs; and land acquisition costs, in most cases paid to tenants either directly or indirectly (Zhang and Li 1997; Yang and Wu 1996; Li and Walker 1996; Ding, Knaap, and Wu 2000).

The formula for calculating the benchmark land price is expressed as:¹⁰

$$P = \alpha(R) \cdot F + R \cdot I + \beta \cdot D + A \quad (\text{Equation 1})$$

Where P = prices of land use rights per square meter;

F = land use rights fee (see Table 2);

α = floor-area adjustment coefficient (see Table 3);

R = floor-area ratio;

I = infrastructure cost;

β = demolition adjustment coefficient, which is dependent on land uses;¹¹

D = demolition cost; and

A = land acquisition cost.

10 See Ding, Knaap and Wu (2000) for a detailed discussion of the benchmark land use rights price system and the difference between “*Shu Di*” and “*Sheng Di*” prices. The former reflects developers’ payments to governments for urban infrastructure that has been installed, whereas the latter reflects developers’ provision of infrastructure, so that infrastructure costs are not a part of land prices but are included in total development costs.

11 β is set to 1, 2 and 4 for residential, enterprise and commercial development, respectively.

TABLE 2
Land Use Rights Fees by Land Grade and Land Use Type, 1996
 (in 1,000 RMB)

Land Grade	Land Use Type			
	Commercial	Apartments	Residential	Industrial
1	3,200–5,400	3,000–4,600	2,000–2,700	320–540
2	2,400–3,200	2,200–3,000	1,500–2,000	240–320
3	2,000–2,400	1,800–2,200	1,000–1,500	180–240
4	1,500–2,000	1,400–1,800	800–1,000	140–180
5	1,000–1,500	1,000–1,400	600–800	100–140
6	500–1,000	500–1,000	400–600	70–100
7	400–500	300–500	150–400	30–70
8	70–400	70–300	50–150	25–30
9	50–70	40–70	30–50	20–25
10	45–50	30–40	20–30	15–20

SOURCE: China Land Newspaper (1996)

TABLE 3
Relationship Between Floor-Area
Adjustment Coefficient and Floor-Area Ratio

Adjustment Coefficient of Floor-Area Ratio

Floor-area ratio	<1	2	3	4	5	6	7	8	9	10
Floor-area adjustment coefficient	1	1.91	2.74	3.5	4.2	4.9	5.6	6.3	7	7.7

SOURCE: <http://www.law999.net/law/doc/d001/1993/07/06/00035268.html>

Clearly, Equation 1 states that land prices depend on land density (floor-area ratio), land grade and land use. Land is classified into 10 levels, or grades, depending on population density, economic and commercial activities, infrastructure and accessibility (Hu 1990). Land use rights fees depend on grades and land uses (see Table 2). The coefficient is determined by the floor-area ratio as illustrated in Table 3. Both parts of infrastructure costs — one for urban infrastructure and the other for community construction — are set as flat rates, as are both demolition and land acquisition costs.¹²

12 In Beijing, the rates for urban infrastructure range from 460 to 800 RMB, and for community construction from 150 to 400 RMB.

Farmland Protection

Rapid urban expansion has caused the fast depletion of farmland, particularly in the urban fringes where high-quality and productive land is located. Urbanized areas increased from 9,386 square kilometers in 1985 to 17,940 square kilometers in 1994, a 7.5 percent rate of annual growth.¹³ A survey using satellite images, taken between 1986 and 1995, indicated that 31 large cities have expanded their urbanized areas by more than 50 percent (Li 1997). Between 1986 and 1995, farmland had lost more than 1,973,000 hectares to nonagricultural construction (State Statistical Bureau 1996), though some estimates indicate the actual number may have been 2.5 times higher (Li 1997). 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 his 1995 book and 1994 article by the same name — *Who Will Feed China?* — Lester Brown questioned the country's ability to feed its growing population in the twenty-first century. Brown believes that a severe shortage in food supply would not only drive up crop prices in the world market but also destabilize China. His thesis and the reality of rapid farmland loss (due to urban spatial encroachment into rural areas) have alarmed top Chinese officials. Seeing self-reliance in crops as critical to the nation's sovereignty and independence in international affairs, their response has been an elevation of that self-reliance to a top national policy priority, and, in turn, adoption of tough farmland protection measures.

The State Council passed the Basic Farmland Protection Regulation (BFPR) in 1994 to protect farmland so that China could begin to establish self-reliance in crops. The regulation prohibits basic farmland from conversion to nonagricultural activities, and mandates that counties and townships designate the basic farmland protection districts in accordance with provincial farmland preservation plans.¹⁴ The basic farmland protection districts organize land at two levels. The first is high-quality farmland with high productivity; it cannot be converted to nonagricultural uses in the long term. The second level is good-quality farmland with moderate productivity; it cannot be converted to nonagricultural uses during the planned period (usually 5–10 years). The designation of basic farmland protection has to be approved by a higher-level authority and is protected by law.

The new 1998 LAL, implemented on January 1, 1999, may have far-reaching influences on land development and urban form. It intends to protect environmental

13 An investigation of 24 large cities indicated that from 1950 to 1980 urbanized area grew at a 3.4 percent annual rate, whereas the annual rate for urban population growth was 2.6 percent. The 1980–1995 rates of growth for urbanized area and population were 4.5 percent and 2.3 percent, respectively.

14 Basic farmland consists of agricultural production bases (such as crops, cotton, edible oils, and other high-quality agricultural products) approved by governments; farmland that has been in production, is highly productive and has good irrigation; vegetable production bases for large and mid-sized cities; and experimental fields for scientific and educational purposes.

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, this volume). Article 33 is the first of two important regulations that may be most influential; it mandates no net loss of cultivated land over time:

People's governments of provinces, autonomous regions and municipalities directly under the Central Government 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. Where the total amount of cultivated land is reduced, the State Council shall order the government concerned to reclaim land of the same quality and amount as is reduced within a time limit. . . . Where individual governments of provinces or municipalities directly under the Central Government, for lack of land reserves, can not reclaim enough land to make up for the cultivated land they used for additional construction projects, they shall apply to the State Council for approval of their reclaiming less or not land within their own administrative areas but of their reclaiming land in other areas.

The demand for land will continue to rise due to urbanization, increasing incomes and economic development. Given the fixed territory, the implication of the article is that land development costs will rise exponentially. This will inevitably slow the pace of urbanization and urban development unless other policies are introduced to counteract the negative impacts of this regulation.

Article 34 requires that capital farmland shall not be less than 80 percent of total cultivated land in provinces, autonomous regions and municipalities directly under the central government.¹⁵ Articles 17–26 include the mechanisms and principles of planning and implementing overall plans for land utilization. A comprehensive scheme of urban development has been widely developed across Chinese cities in order to provide appropriate means to achieve balanced development between society, economy and environment (Tang and Liu 2002). It requires that urban development be coordinated through planning to eliminate redundancy and duplicated construction, rationalized in layouts so that land use is efficient, and provided with sufficient infrastructure. It is, thus, expected that urban development patterns will be different from those of the pre-reform period.

15 Protected capital farmland comprises: (1) cultivated land, within bases of grain, cotton and oil crops production, that is designated as such with the approval of the relevant departments either under the State Council, or of the people's governments at or above the county level; (2) cultivated land with good irrigation and water- and soil-conservation facilities, as well as medium- and low-yield fields that are either under improvement according to plan, or improvable; (3) vegetable production bases; (4) pilot fields for scientific research or teaching of agriculture; and (5) other cultivated land that should be designated as protected capital farmland, according to regulations of the State Council.

Land Acquisition

Both the Chinese Constitution and the 1998 LAL specify that the state, in the public interest, may lawfully requisition land owned by collectives. This sets the stage for compulsory land acquisition. Though both documents require that peasants' lives not be adversely affected by land acquisition, implementation of this requirement is difficult, in part because any measures of life changes for peasants are multifaceted; income is just one of the dimensions.

The 1998 LAL further states that collective communes should be compensated when their land is requisitioned. Rather than being paid full "market" prices, communes are compensated through a package that includes three components: compensation for the land, resettlement subsidies and compensation for attachments to, and young crops on, the requisitioned land. The law stipulates that compensation for the requisition of cultivated land shall be 6–10 times the value of the average annual output of the acquired land for three years preceding such requisition. The size of resettlement subsidies depends on how many people live on the farmland, but each person's resettlement subsidy shall not exceed 6–10 times the value of the annual yield from the occupied farmland. For peasants to maintain their same standard of living, the local governments (provincial and city) may raise the resettlement subsidies, but the total compensation for land and resettlement subsidies cannot exceed 30 times the previous three-year average output value of the acquired land.

Urban Growth Policy

The 1980s saw great debates about how best to achieve urbanization. Despite a lack of empirical evidence, many scholars believed that problems such as congestion and environmental pollution seriously affected the well-being of urban residents and imposed high social costs. During the last two decades, the central government adopted a national policy that strictly controls the population growth of large cities (those with a population >0.5 million); promotes moderate growth of middle-sized cities (those with a population of 0.2–0.5 million); and actively develops small cities and towns (those with less than 0.2 million).¹⁶

16 Urbanization was achieved through three different means in China. The first is migration to urban areas, which stimulates housing demand and helps to form rental markets. The second approach expands existing urbanized areas by converting surrounding agricultural land to urban land uses. The third is the so-called "on site" urbanization, through which farmers become urban residents — without having to leave their land — by converting their villages into towns or cities. This third type of urbanization is obviously not "real" urbanization according to conventional definition since it involves neither career changes nor land development.

Land Policy Reform: Effects and Issues

Effects of Land Policy Reform

Land policy reform in China has resulted in outstanding positive effects on land development, government finance, real estate and housing development, infrastructure provision, urban growth and land use efficiency. The most significant impacts of the LUR may be its contribution to the emergence of land markets in China, and the introduction of price mechanisms to rationalize land use and allocation (Ding, Knaap, and Wu 2000; Xue 1994; Walker and Li 1994). For the first time in modern Chinese history, land has value and can produce economic wealth. Nationally, land sales slowly increased from only 5 lots in 1987 to 545 lots in 1991. Land markets showed a steep rise from 1992 to 1994: the total number of land transactions jumped to 2,800 in 1992, 42,076 in 1993, and 97,405 in 1994, respectively (see Table 4).

The reform period has also witnessed changes in spatial land use structures. Though capital density increased rapidly, population density changed little if any, unlike an increase in floor-area ratio. This is mainly because Chinese cities are overcrowded, particularly in city centers, and socioeconomic development contributes to rising consumption of floor space per capita. Another trend is the reduction of industry and warehousing in central locations and the rising share of commercial and office space. However, by international standards, the industrial segment of Chinese cities still is large, comprising 20–40 percent of built-up areas, as compared with 6–10 percent in industrialized countries.

The impacts on municipal governments of the sale of land use rights are numerous. These transactions account for 25–50 percent of cities' revenues. For example, in Guanghai, in Sichuan Province, sale of land use rights generated 25 percent of

TABLE 4
Land Transactions in China, 1987–1996

Year	Number of Lots	Area (ha)	Value (million RMB)	Price per Sq. M. (RMB)	Average Area per Transaction (sq. m.)	Price per Lot (million RMB)
1987	5	15.7	35.2	223.5	31,460.0	7.0
1988	118	389.1	416.2	107.0	32,972.9	3.5
1989	127	625.2	447.2	71.5	49,229.9	3.5
1990	482	948.2	1,052.0	110.9	19,672.2	2.2
1991	545	1,036.1	1,136.9	109.7	19,011.6	2.1
1992	2,800	2,189.0	52,500.0	2,390.8	7,817.9	18.8
1993	42,076	3,822.5	40,529.3	1,060.3	908.5	1.0
1994	97,405	3,295.5	35,928.5	1,090.2	338.3	0.4
1995	105,473	2,872.8	33,285.7	1,158.7	272.4	0.3
1996	103,921	2,269.9	29,048.4	1,279.7	218.4	0.3

SOURCES: Yang and Wu (1996); and State Statistical Bureau (1990–1996)

the city's total revenues in 1994. Dunhuang, in Gansu Province, earns more than 40 percent of its revenues from the sale of land use rights. Shanghai has collected more than 10 billion RMB annually since 1992, and Guangzhou Province has realized more than 20.5 billion RMB from the sale of land use rights (Yang and Wu 1996). Local governments' revenues will be multiplied if indirect impacts of land development, such as employment, and backward and forward linkages, are taken into account. Extra or off-budget revenues enable local governments to conduct large-scale infrastructure provision and neighborhood redevelopment. This is particularly important in city cores where there are many unsafe houses and insufficient infrastructure (Zhu 1999; Yeh and Wu 1996; Li 1992). Fuzhou, for instance, collected 2 billion RMB from the sale of land use rights between 1987 and 1993, and used the funds to construct urban infrastructure and housing. It raised per capita housing consumption from 3.98 square meters in 1980 to 8.2 square meters in 1993. The proportion of 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).

Issues of Land Policy Reform

Despite the many positive outcomes associated with land policy reform, problems persist.

Property Rights. Even though the state owns all urban land, the Constitution is unclear about who represents the state, what constitutes the local government role in land management, and what rights are assigned to the state entities that actually occupy land. These uncertainties pose great challenges to land management, land development monitoring and implementation of land use plans. In addition, the legal ambiguities of land rights for communes and farmers in rural areas have left farmers unprotected in cases of land development and compulsory land acquisition.

Land Management, Development and Planning. The ambiguities in land rights lead to confusion and malfunction in land management. First, there are many different government agencies involved — or interfering — with land use and land development decisions. Sales through the open tender and bidding process account for only 10–20 percent of all land use rights sales. The majority of the transactions of land use rights happen through negotiation, which makes it difficult to implement comprehensive land use plans. Second, there is an urgent need to develop management capacity to cope with issues arising from the development of free markets. For instance, five-year land use plans in many cities cannot provide development guidance — in part because their rigor makes them somewhat inflexible in dealing with rapid urban development, and in part because administrative systems

have not yet accommodated to the evolution from a planned to a market system, as evidenced by the absence of economic analysis from many comprehensive land use plans.

The revenue-sharing agreement between the local and central governments is blamed for problems such as chaotic and uncoordinated development, an out-of-control, first-level land market and redundant delineation of economic development zones or districts. Local government officials, interested in raising revenue, sell land use rights beyond the levels of municipal need, demand in-kind contributions that actually reduce the central government shares, and exchange land for other commodities such as houses. These overzealous practices yield profound, negative, long-term consequences. First, the revenue-sharing scheme encourages local governments to sell as much land as possible for their own political purposes, leaving less and less land available for future governments' needs. This creates the second problem: how to generate revenue for public services and infrastructure provision if land has been sold out? In some cities, the revenues from the sales of land use rights account for 20 percent of the total budgets that cities can use to finance development. Finally, without land or property taxes, Chinese governments are not able to capture increases in value over time in the framework of a long-term leasehold system. The potential revenue losses will be enormous.

The farmland protection effort has many negative effects on urban development. It explains, in part, new development patterns in southern China, where "every village looks like a city" and "every city is a village." This describes a phenomenon wherein development makes farmers rich, and they in turn build modern houses. Since these modern houses are separated by other farms and are not served by public infrastructure, such new developments look modern at the micro level but chaotic at the macro level. The BFPR tends to create urban villages that are surrounded by urbanized areas when quality farmland is located in fast-growing urban fringes and the law forcefully pushes economic activities further out, leaving farmland in between. Urban sprawl can then result, increasing transportation costs and generating negative externalities.

Hidden Land Markets. Hidden or invisible land markets are very active across Chinese cities, particularly in those with rapidly changing economic development areas. The common forms of these hidden land markets are (Yang and Wu 1996):

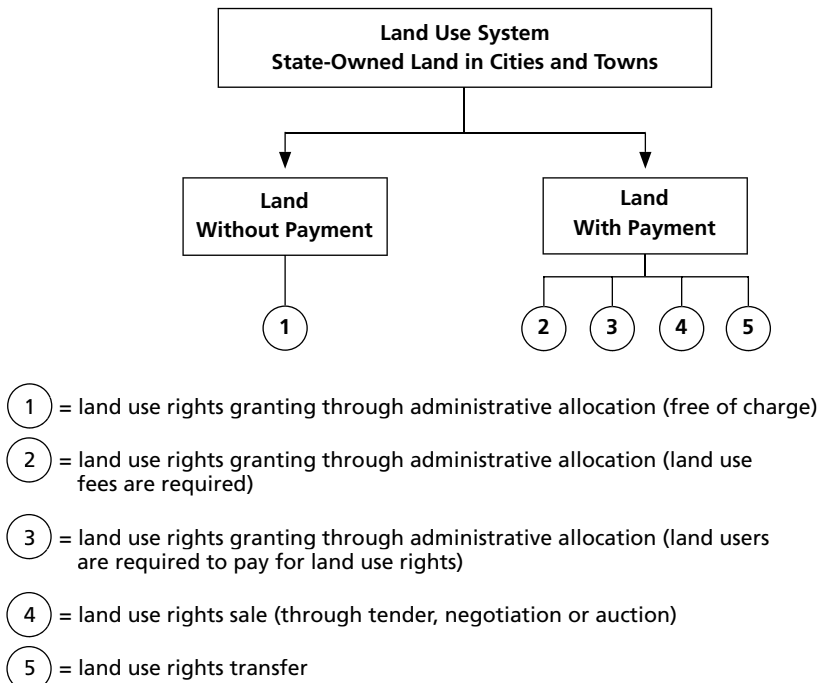
- transfer of land use rights through housing sales and rents;
- rental or sale of unused land that was obtained free of charge;
- transfer of land use rights in exchange for housing and other commodities;
- acquisition of stock shares by granting of land use rights; and
- transfer of land use rights through mortgage, merger and restructuring of state-owned enterprises.

Huge profits provide economic incentive for illegal land transactions, while loopholes in land regulations and laws encourage people to take risks without the worry of getting caught. The coexistence of land allocation systems creates the so-called “double-track” system when the LUR is adopted and at the same time the old land tenure system is still in effect. This results in two ways to obtain land use rights: one is to obtain them without payment, and the other is to buy them from the state or other parties (see Figure 1).

These hidden markets have caused substantial revenue losses to state and local governments, adversely affecting urban development under the guidelines of urban comprehensive plans. They have increased social inequality and corruption, triggered land opportunism and distorted land markets. Both Fushun and Chongqi lost 13 million RMB from land revenues in 1990 (Yang and Wu 1996). Invisible land markets cause distortions so that land prices may not fully reflect market conditions (Ding, Knaap, and Wu 2000; Li and Walker 1996). However, the inability to implement land regulations and control land markets, and the lack of a land registration system, make it difficult to estimate accurately the impacts of hidden land markets on urban land development.

Rising Land Development Costs. Land policy reforms have made land an expensive input for developers. Both the BFPR and the 1998 LAL protect farmland in

FIGURE 1
The “Double-Track” Land Allocation System



order to maintain self-reliance in crops. The laws have achieved their designated goals well, but have also yielded negative impacts on urban land use and urban development. In Beijing, for instance, land costs account for 30–40 percent of total land development costs if the development occurs on farmland. Land costs consist of the prices of land use rights, resettlement of farmers and compensation for agricultural losses, and are approximately equal to construction costs. Land costs, however, can reach 60 percent of total land development costs if development is located in existing urban areas where developers have to resolve resettlement agreement issues with tenants, who can be very demanding and, for instance, refuse to move out unless they are satisfied. Thus, resettlement of tenants can be one of the greatest challenges for developers, and can, along with demolition costs, represent a significant cost component.

Alternatively, developers have aggressively sought cheap land in urban fringes, and cities have rapidly encroached into farmland during the past two decades. The 1998 LAL, however, mandates that developers should be responsible for farmland depletion resulting from their development, and should make up for the farmland losses. Thus, another item, farmland reclamation costs, is added to the cost of land development. Given that political territory is fixed, exploitable land will deplete faster and marginal costs of exploitation will rise exponentially over time. This inevitably makes horizontal land development (urban spatial expansion) more and more difficult and slows down urban development.

Issues in Land Acquisition. Governments are ill equipped to address the issues that have emerged from land acquisition because of lack of preparedness and time lags in legal, institutional and policy responses to rapid change. The first problematic issue in land acquisition is related to the ill-defined concepts of property rights and development rights: who is entitled or empowered to acquire land from peasants for urban development? By law, any entity — including the state, the state’s representatives (e.g., provincial, city and county governments, or *danweis*), or even individuals — that justifies a project as being “in the public interest” may carry out compulsory land acquisition, even though the project may be commercial housing and development, an industrial park (which can attract private investment), or entertainment related (e.g., a golf course), to name only a few examples not genuinely “in the public interest.”

This multiparty involvement in compulsory land acquisition has arisen via both societal evolution and an ill-defined legal concept of public interest. For instance, it has been difficult to separate the interests of firms from those of the public because many firms, particularly in cities, were owned by the state. As economic reform and development significantly diminish the roles of the state-owned enterprises, Chinese law will need to reexamine the concepts and definitions of public interest and public projects.

The multitude of players in the land acquisition process has led to widespread patterns of uncoordinated and chaotic urban development and has undercut urban planning efforts. Two urban phenomena stand out. One is the extremely close-set buildings — so close that people can “kiss” each other from the windows of neighboring buildings. Passage between them is so narrow that police, fire, and garbage collection vehicles cannot gain access to the buildings. The other phenomenon is the so-called “*cheng zhong chun*,” or village located in the middle of a city. This pattern not only makes a city look unattractive, but also interrupts important urban economic, social and cultural functions. With these patterns, both transportation costs and externalities arising from incompatible land uses will increase substantially.

The second problem is the matter of who is entitled to compensation when land is acquired. The village commune is the basic socioeconomic organization in rural areas. The commune’s largest, if not only, asset is the land that is collectively owned by its members. On that basis, both a village commune and its members are entitled to share compensation. The money retained by the village commune is supposed to finance projects and/or causes that benefit all of its members, such as irrigation or village-owned enterprises. Without adequate accounting and auditing systems at the village commune level, however, compensation retained by the village commune committee is widely abused and becomes a source of corruption. To make matters worse, different levels of governments (e.g., township, country and city) each take a cut of the monetary compensation given to farmers who lose their land. Farmers eventually may receive less than one-third of the compensation specified by the 1998 LAL.

For instance, China built a natural gas pipeline from the western to the eastern part of the country. It was a national project, so compensation to peasants was paid by the state, but compensation amounts varied with the different states of economic development of provinces. For example, the state gave 20,000 RMB per *mu* to peasants in Henan province for their land. Given the fiscal structures between governments, these monies were allocated downward to lower levels of government (from the state to province, city, country and township, respectively). At each level, a portion was retained for government use in financing public goods and services. Peasants received only 5,000 RMB in the end.

This practice is rationalized in the principle of value capture, which would hold that because the peasants did nothing to create increased value in the land, they are not particularly entitled to any value increment at its sale. What constitutes a fair division of compensation (into the peasant’s share and the government’s value-capturing share) is a legitimate question to which there is not yet a satisfactory answer. Certainly, more research will be conducted to address it. The low number of complaints by peasants suggests that their share is sufficient, at least to maintain their living standards, which is one of the legal requirements.

The third issue centers on fairness of compensation — involving both adequacy of compensation and variation in compensation. The 1998 LAL set both a floor and a ceiling for land acquisition compensation. Since there are no market data that can truly reflect the price of farmland, compensation hardly reflects market conditions and varies dramatically from case to case, depending mainly on who plans to develop the land. For instance, profitable projects such as commercial housing and development can afford higher prices for land than can transportation and infrastructure projects such as highways, railroads, airports or canals. If these different kinds of projects (that is, private versus public) occur in one village but at different times, or at the same time but in different neighboring villages, peasants who have been less well compensated feel unequally treated by government. Many complaints involve this inconsistency in compensation over both time and space. Such inequity not only contributes to rising tension and distrust between peasants and the government, but also makes planning implementation and land management difficult.

Finally, it is increasingly difficult and costly to resettle peasants. The 1998 LAL requires that the lives of farmers not be adversely affected by compulsory land acquisition. The law does not specify concrete measures of that goal; consequently, several years after acquisition, many peasants are worse off than before they lost their land. This situation is not difficult to imagine. Farming cannot make peasants rich, but it generates sufficient income to support at least a minimum standard of living. Thus, farmland can provide lifetime security for many peasants, making it challenging to “detach” them from their land. Compensation, on the other end, does not measure up to this kind of lifetime security. Further, without appropriate training and skills in financial management of their lump-sum compensation, and without appropriate investment vehicles (in the event their compensation is even large enough to invest), peasants very commonly end up — several years after land acquisition — with no land to farm, no income stream to support themselves and no job skills with which to compete in tight urban job markets.

Emergence of Urban Sprawl. As noted previously, the BFPR tends to create urban villages surrounded by urbanized areas. The urban growth policy adopted in 1980 to control such urban sprawl failed in several respects. First, it contradicted other national policies, such as the SEDZ initiatives, whereby local governments and enterprises enjoyed the benefits of tax exemptions and were able to access capital resources that were unavailable otherwise. Many zones were established in large cities, including Shanghai, China’s largest. Second, large cities have experienced the greatest spatial growth, compared with mid- and small-sized cities (Nanjing Institute of Geography and Lake Study 1999). Third, rapid development and establishment of small towns have depleted agricultural land at an unprecedented rate. In the past 10 years, China’s agricultural land decreased by 100 million mu while its population increased by 150 million. Per capita agricultural land decreased to 1.76 mu,

47 percent less than the world average. If farmland protection is the primary goal, the development of small cities and towns should not be encouraged because they consume more land per capita than large cities. Given the anticipated urbanization in the next 20–30 years, large cities and high densities should be encouraged to protect farmland.

Obstacles to Urban Development. Over time, high land development costs and strict farmland preservation regulations, individually or combined, inevitably make horizontal land development (urban spatial expansion) increasingly difficult and slow down urban development.

Deficiencies of the Benchmark Land Use Rights Price System. The benchmark land use rights price system has two major flaws (Ding 2003). The first is the system's use of floor-area ratio as a dominant factor in land price determination, which practice is at odds with urban economic theory. The second is that the system does not provide adequate flexibility for substitution between land and capital inputs, which is key to achieving land use efficiency under market principles. Land costs should be fixed costs in real estate development and should not increase with the scale of development. Unfortunately, land costs do depend on the scale of land development in Chinese cities, which certainly affects market efficiency. Urban planning practices and the benchmark land use rights price system have resulted in high housing prices. In Table 5, the illustrated total project costs of land development are broken into five components: (1) land acquisition, resettlement and demolition; (2) construction; (3) urban infrastructure; (4) taxes and fees; and (5) land use rights. Among these, items 1 and 5 should be subject to a change in floor-area ratio and should be constant, regardless of the scale of land development. Items 2 and 3 should increase with the intensity of land development as measured by capital density. Item 4 may or may not change along with capital density, depending on the way in which it is determined. For simplicity's sake, we assume that item 4 remains constant and both construction and urban infrastructure costs are a linear function of floor-area ratio.

The base case in Table 5 shows a land development project in Wangjing, Beijing, which was launched in a 27,000-square-meter area and was permitted to 110,000 square meters of floor space, for a floor-area ratio of 4.1 (Wang 1997). The housing price per square meter was 5,400 RMB. According to principles of microeconomics, a simple simulation was performed, in which floor-area ratio is allowed to change and cost components are divided into fixed and variable costs. Table 5 illustrates that when floor-area ratio increased from 4.1 to 10, housing price per square meter declined from 5,400 RMB to 3,314 RMB, a striking 40 percent decrease.

TABLE 5
Simulation of Housing Price Change with Free Substitution of Land and Capital Inputs

Development in Old Districts	Price per Sq. M. (RMB)	% of Total Project Costs	Wangjing Base Case	Simulation Scenarios						
				1	2	3	4	5	6	
RMB			10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Land input (as constant) (in sq.m.)			27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000
Total floor area (sq. m.)			110,000	162,000	189,000	216,000	243,000	270,000	270,000	270,000
Floor-area ratio			4.1	5	6	7	8	9	10	10
Land Development Project Costs										
(1) Land acquisition, resettlement, and demolition	1,890	0.35	20,790	20,790	20,790	20,790	20,790	20,790	20,790	20,790
(2) Construction	1,080	0.20	11,880	17,496	20,412	23,328	26,244	29,160	29,160	29,160
(3) Urban infrastructure	800	0.15	8,800	12,960	15,120	17,280	19,440	21,600	21,600	21,600
(4) Taxes and fees	982	0.18	10,802	10,802	10,802	10,802	10,802	10,802	10,802	10,802
(5) Land use rights	648	0.12	7,128	7,128	7,128	7,128	7,128	7,128	7,128	7,128
Housing price per sq. m.	5,400		4,748	4,270	3,929	3,673	3,473	3,314	3,314	3,314

SOURCE: Ding (2002)

Social Conflict and Injustice. Two types of social conflict have arisen with implementation of land reforms: conflict between urban governments and peasants, and conflict among peasants. The former happens mainly in two cases. Since farmers have been compensated instead of being paid full market prices for their land, and as compensation packages have become less appealing, there is increasing resistance to land acquisition by the government. The second government-peasant conflict case relates to the government compensation packages that cannot match profits farmers can realize if they develop the land themselves. Farmers are reluctant to sell their land use rights to the government, and social conflict arises when the government exercises eminent domain to acquire their land. The social conflict among peasants arises when the law prohibits land development on quality farmland. Farmers find it difficult to resist developing land themselves, when doing so might generate profits 200–300 times higher than net profits from farming. Without income transfers or a spatially differentiated tax-rate system, farmers on quality farmland will be economically disadvantaged compared with farmers whose land is not restricted from development.

Issues in Land Use Taxation. The initial assessment of land taxes in China yielded a mixed result. The Provisional Act of Land Use Taxation on State Owned Urban Land ended the land tenure system that favored free land use, and marked the beginning of the determination of land use through price mechanisms and tax policy. Since then, land use efficiency has improved and there is now an economic incentive for landowners to return unused land that has been allocated free of charge. Fushun, for example, returned 250,000 square meters of unused land to the government in 1985.¹⁷ Land taxes provide a new revenue source for local governments to use in financing long-overdue urban infrastructure. Fushun collected nearly 28.5 million RMB in land use fees from 1984 to 1986, and used these funds to finance infrastructure such as streets, water, gas and heating provision, and greenspace development.

The land tax system does, however, have several drawbacks. First, the many land uses that are tax exempt undermine the role of land taxation in managing and rationalizing land use.¹⁸ Second, there is confusion among officials and scholars because foreign investors are charged land use fees while domestic land users are charged land use taxes. Third, even though tax rates are moderate or low, land use taxes significantly increase costs for large- and medium-sized, state-owned enterprises, many of which are established on large lots of land. Many of these enterprises

17 More recent data are unavailable.

18 The following land uses in urban areas are exempted from land taxation: government bureaus, people's organizations and military units; nonprofit enterprises funded by governments; churches, parks and historic preservation districts; transportation networks, public squares, greenspace and other public land uses; agriculture, forestry, pasture and fishing; uses previously established in mountainous, hilly or aquatic areas, and uses on land redeveloped from brownfields; and any other uses — such as energy, transportation, irrigation, etc. — that have been specifically exempted by the department of finance.

have had a hard time balancing their budgets since the 1980s; an estimated 30–40 percent of state-owned enterprises have been in deficit during the last decade. A contributing factor is that land taxes, which are based on size — and not on capital value, site value or rental value — might be significantly higher than those based on value or rent.

Finally, municipal governments may not be interested in tax collection, especially when there are many state-owned enterprises within their administrative boundaries, because most land taxes go to the state rather than to municipal governments. It is challenging for the state to stimulate local governments to collect land taxes actively on one hand, and avoid tax revenue losses on the other. This explains why the revenue-sharing agreements for land use rights sales between the local and central governments have been modified several times in the last 10 years. In addition, the lack of a land registration system and trained staff makes it difficult and expensive to collect land use taxes. Revenues generated from land use taxes have not met expectations: the state expected them to generate revenues of 10 billion RMB annually, but instead collected only 2.5 billion RMB from 1988 to 1990 (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. Apart from their limited contribution to the financial situations of municipal governments, land taxes may not affect urban land use efficiency as theory has suggested.

Challenges in Land Policy Reform

Supplying land for ongoing, rapid urbanization will continue to be a challenge in years to come. Because public projects cannot offer farmers the same levels of compensation as can developers of profitable projects (like hotels, commercial housing and even entertainment complexes), local governments find it increasingly difficult to acquire land for genuinely public projects, such as highways, railroads, airports or canal systems.

The second challenge is how, in the compulsory land acquisition process, to compensate peasants fairly for their farmland. Low levels of land compensation — whereby governments capture land value increases disproportionately — impose a serious long-term threat to the stability of sustainable development in China. The number of people who live poorly after land acquisition continues to rise. For instance, Zhejiang province alone has more than 2 million *shi di* farmers (farmers who have lost their farmland). In 2002, more than 80 percent of the legal cases filed by peasants against governments in the province were related to land acquisition. This problem is a potential source of instability and could easily escalate in the next decade or two, given the substantial anticipated need for land to accommodate massive urbanization. According to the General National Land Use Comprehensive

Plan, China will need 18.5 million mu of land for nonagricultural uses in the first decade of the twenty-first century. Of that, 90 percent will be acquired from farmers. Based on the number of farmers currently occupying farmland in China, an estimated 12 million farmers will lose their land during this decade of acquisition. Without fair compensation or other efforts to assure their social security over the long term, the plight of these farmers will present enormous socioeconomic problems for years to come.

The third challenge is associated with the rate of urbanization. Given the socioeconomic development objectives laid out in the report of the 16th Communist Party Convention in 2003, the pressure for urban development will be enormous. According to the report, the 2020 growth targets estimate that 55 percent of the population will be in cities and the gross domestic product will quadruple. The total population of China is estimated to be between 1.6 billion and 1.8 billion by that time; the migration from rural areas to cities will be in the range of 10 to 15 million people annually (with the rate of natural urban population growth considered). The need for urban economic development is urgent if the country is to be able to absorb such massive rural-to-urban migration. Providing cheap land to accommodate urban economic growth will be one of the central themes of the national policy agenda.

The fourth challenge is how to achieve a balance between farmland preservation and urban spatial expansion — a question to which there may not yet be any answers. Farmland preservation, by increasing land development costs, slows down urban development. Given the pace of urbanization anticipated in the coming years, pressure to provide jobs will make urban economic growth critical. That economic growth will lead, inevitably, to encroachment into rural areas to take advantage of cheaper land — countering the goals of farmland preservation. How the Chinese government addresses this dilemma remains to be seen.

The fifth challenge relates to the maturing land markets, in which prices will play a more dominant role in land use and land allocation decisions. The dual land markets, hidden land transactions, and ill-defined property rights and responsibilities of state entities all represent challenges to efforts to improve land management capacity. Even though there is no clear division between market determination and government intervention in land use decision making, China will need to reduce its administrative influences in urban policy and management and promote market principles.

The final challenge is how to strengthen the fiscal conditions of local governments, which are pressured to take increasing responsibility for the provision of infrastructure and public services. Local governments need their own revenue sources to be effective in managing, planning and controlling urban growth so as to benefit urban residents socially, economically and environmentally.

Final Remarks

Although policy change in China is typically gradual, land policy reforms have been enacted at a much faster pace and have contributed significantly to the remarkable socioeconomic progress of the past two decades. Land use efficiency has improved, market mechanisms and price principles have been introduced to rationalize land allocation, the government's revenue from land use rights sales has risen, and the quality and quantity of public services have improved. Reforms have also boosted real estate development and created job opportunities.

Yet, numerous problems such as land management, hidden land markets, social conflicts, inequality, corruption and unincorporated urban development have accompanied this progress. Future land policy reform faces the following challenges.

- Balancing the demand for land to satisfy rapid urban growth with the increasing pressure for farmland preservation.
- Reconciling the inconsistencies and conflicts between land regulations and policies. These reflect other conflicts that are deeply rooted in the Chinese political and administrative systems, which sometimes assign dual and conflicting roles to different government authorities. These kinds of problems will not be solved easily in the future without major political reforms.²¹
- Dealing with the increasing social injustice arising from land policy reform. Profit differentials between agricultural and nonagricultural activities make it difficult for government officials to convince farmers not to develop their agricultural land themselves. In addition, the basic farmland protection regulations penalize law-abiding farmers by stripping away their land development opportunities, and indirectly reward farmers who are able to gain windfall wealth from land development of unrestricted sites. Spatially differentiated tax rates may help address this issue.
- Improving land use efficiency. High-density development would seem to be a good solution in the effort to balance the increasing demand for land (due to rapid urbanization) and the rising pressure for farmland protection. This urban development strategy requires changes in land regulations and city policies to ensure the economic profitability of urban redevelopment. However, improving land use efficiency across Chinese cities is currently restricted by predetermined and inflexible floor-area ratios. There is currently no economic incentive for developers to commit to high-density development.

21 There are, for instance, conflicts between the LUR and farmland protection. The adoption of the LUR is intended to rationalize land use and land allocation through market principles and price mechanisms. In contrast, the implementation of farmland protection regulations is intended to restrict development of potentially lucrative sites through the designation of farmland protection districts. Society as a whole may be better off if developers are allowed to develop quality farmland at favorable locations, instead of being forced to develop low-quality land at remote locations. Also, conflicts of interest sometimes occur because government ministries are responsible for both drafting and implementing laws and regulations — thus creating dual, and potentially conflicting, roles of legislation and enforcement.

Effective responses to resolve these challenges require not only creative and innovative thinking, but also the empirical data and case studies that enable a comprehensive assessment of the costs and benefits of policy responses and instruments across a wide socioeconomic spectrum. Such an assessment would include, but not be limited to, the following inquiries.

- To what extent is land use efficiency lost under the old land allocation system? This question is largely associated with the degree to which land misallocation occurred under the old policy and administrative regime. The answer to the question also depends on the spatial implication of this misallocated land.
- What are the total costs (direct, indirect and induced) of farmland protection and land administration laws that require “zero net loss” of farmland during urbanization? It may be relatively straightforward to calculate benefits in terms of farmland preservation, but it is more complicated, and usually difficult, to determine the costs. Increases in land development costs will inevitably put some developers out of business, causing housing prices to rise and the demand for construction to decrease. Many industrial sectors also will be hurt in terms of outputs, employment and incomes.
- What are the geographic implications of land policy and how do they affect urban form and the spatial arrangement of urban activities?
- To what extent do urban land policies affect the competitiveness of the urban economy?
- How can governments capture increases in land value that are attributable to public investment? Accumulated public investments have contributed substantially to the differentiation of land values. In turn, property values will continue to affect land and housing values. The need to design a mechanism to capture these land value increments is critical and immediate, and the impacts of associated policy should be fully understood.

These important questions invite future investigation, and it is the authors' hope that this summary and the following chapters in this volume will help shape that investigation and other research and policy discussions to come.

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