



Policy and praxis of land acquisition in China

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Abstract

Land acquisition is the primary means used by governments to meet increasing land demand driven by rapid economic and urban growth in China. Since development is prohibited on non-state-owned land, land acquisition in which landownership is converted from collective communes to the state shall take place prior to any land construction. This paper reviews institutional structure governing land acquisition in pre- and post-reform eras and examines consequences and impacts associated with or derived from land acquisition. It is concluded that land acquisition (1) has been used heavily by local governments to fuel urban development and finance infrastructure provision and (2) has resulted in increasing social tension and injustice that may impose a long-term threat to stability and sustainable development.

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Introduction

Land has been in the focus of policy debates among scholars, politicians, policy makers, and urban managers partly because it is a peculiar good and partly because there is increasing scarcity in land due to fast population growth and rapid urbanization. This is so particularly in case of developing countries. Not only is land considered essential to life support for farmers but it also becomes one of the most important assets that can be a principal source of wealth and power (Mattingly, 1993). As a result, extensive literature exists on impacts of land rights, access to and tenure security on economic development, social advance and justice, poverty reduction, and political implications (Larbi et al., 2004; Misra, 1991; Nyambara, 2001; Skyner, 2001; Barbier, 1997).

One of the outstanding issues and challenges in land management, particularly in developing countries, is how best to provide land to accommodate urbanization in ways that fuel economic growth and promote human settlement. Fast urbanization demands land for employment placement, housing, and urban infrastructure. This demand for

land is often met through urban encroachment into rural areas. China, perhaps one of the fastest urbanizing countries in the world in the first decade of the 21st century, is projected to have a net 10–15 million new urban residents annually (Ding, 2004b). Most of them are migrants from rural areas. It will be extremely interesting to observe how urban and land policies in China will evolve to accommodate this unprecedented transformation. Documenting their short- and long-term impacts will add insights to the existing literature.

Driving around a bustling Chinese city, one can almost feel the pace of change. Infrastructure projects, urban renewal, housing development, and reform of state-owned enterprises are taking place at an unprecedented pace and scale. Today China boasts one of the world's fastest growing economies, some of the most vibrant cities, and is among the most active and interesting real estate markets. Urbanization rates were 18% in 1978, 30% in 1995, 36% in 2000, and more than 40% in 2004.¹ Together with a 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 m² of residential construction were completed. This means

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¹Source: <http://www.chinacsw.com/xinwen/dyt.htm>.

260 million m² 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 3.6 m² in 1979 to 9.8 m² in 1999.² This has resulted in urban spatial expansion in an enormous 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 mu³ annual increase in land use for buildings from 1996 to 2003.

This unprecedented urban development can be attributed to two institutional settings—land use rights (LURs) system and land acquisition. LURs were adopted in the late 1980s to promote land markets and to improve land management and land use efficiency (Ding, 2003; Keng, 1996). The impacts of LURs are manifold (Ding, 2003). It not only promotes housing and real estate development but also provides important revenue sources for local governments to finance large-scale urban projects. LURs are also instrumental in launching other initiatives, including but not limited to, urban infrastructure, urban renewal, and reforming of state-owned enterprises. This policy of pricing land uses also improves urban land use efficiency through emerging land markets.

The LURs defines two levels of land markets (LURs markets). The first level refers to the leasing of public-owned land in the cities and towns by local governments to users. These users can then sell, rent, mortgage, sublease to third parties, which defines the second-level land markets. The users are required to pay up-front land conveyance fees that depend upon leasing periods and land use intensity (Ding, 2003).

The other institutional framework is land acquisition, whose contribution to urban and economic development has been largely associated with the institutional scheme of leasing public land. In general, land acquisition works on two grounds: (1) conversion of rural collectively owned land to state-owned land shall take place first; (2) institutionalizing powers of local governments so that they can, at low cost, expropriate land from farmers and then sell it to developers at much higher prices. The monopoly of local governments on the first-level land market helps them to control land prices to guarantee sufficient land revenues from land acquisition and leasing (Ding, 2004a). Through this process of acquisition and leasing, local governments are able to assemble large amounts of cash needed to finance urban development.

Despite the benefits of the public land leasing system for local government financing, flaws and ambiguities within the legislation and implementation of land leasing policies have produced negative impacts for various sectors of society. The purpose of this paper is to examine the

institutional framework governing land acquisition and conduct an assessment of the various impacts of land acquisition policies. Several reform initiatives and their potential impacts are also discussed. It is concluded with recommendations for policy reform.

Literature review

Land acquisition in developed countries is primarily used as a tool to protect and/or preserve open space and parks, to protect natural ecological systems such as forest and wetland, to restore damaged environmental systems, to develop and manage water resources and supply, to provide public access, to improve public land management, and to protect land for conservation easements. For instance, Florida designates \$66 million in its annual budget to conduct land acquisition for conservation, open space, and outdoor recreation.

Land acquisition has been used as a policy instrument to correct market failures in urban development, to achieve environmental and social goals, or to help to implement land use plans. Therefore, land acquisition, even in a market economy, is justified as follows:

- Mis-pricing of infrastructure and profit-driven private markets often result in urban development patterns that have inadequate provision of public and urban basic services, inadequate provision of open space and recreational parks and park facilities, and inadequate protection of natural environmental system such as wetland and farmland (Barbier, 1997; Hosier, 1988; Hoffman and Todd, 2000).
- Public goods, interests, and services such as schools, hospitals, roads, and easements require governmental intervention in land development by imposing certain types of restrictions on even privately owned land. For instance, eminent domain give governments power to compulsorily take land from individuals as long as this serves public interests (Darin-Drabkin and Darin, 1980; Lynd, 1987; Moulton, 1995; Lawlor, 2004).
- Restrictions on the ways land can be used in terms of type and intensity help to achieve social, environmental, and cultural goals and objectives (Zaman, 1996; Kivell and McKay, 1988; Dwyer et al., 1995).
- Urban land development patterns driven by private markets often harm environment and natural ecological system, hurt urban poor, and bring in social costs to society (Mattingly, 1993; Tobin and Knausenberer, 1998; Pyle, 1985; Munby, 1954).
- Successful implementation of urban and regional planning needs sound land management and policy. Land (including land acquisition) plays a critical role in water resource management and supply, environmental protection, and farmland preservation (Press et al., 1996; Hosier, 1988). Transferable development rights can be considered a partial land acquisition (only developable rights, not other rights such as ownership, use rights,

²Source: <http://www.dajun.com.cn/fangdichan.htm>.

³Mu is an area unit in China. One mu is 666.67 m².

mortgage rights, etc.) (Hahn, 1984; Stinson, 1996; James and Gale, 1997).

- The need to address social issues such as equity and justice becomes urgent and critical in fast urbanized countries. In many developing countries, land is perhaps the largest asset for farmers. Access to land markets, controlling of land prices, and land tenure security are important to help farmers benefit from urbanization and industrialization (Mukherji, 1976; Moyo, 2000; Tobin and Knausenberer, 1998; Watson, 1989).

The consequences of land acquisition can be enormous. The impacts on displaced households can be far-reaching and long-lasting (Syagga and Olima, 1996). Income reduction, loss of means (land) of living support, and breakdown of social network are the most identifiable adverse effects on displaced households. Resumption of farmland may forego potential benefits from urbanization (Larbi et al., 2004; Zaman, 1996; Coldham, 1995). This loss of opportunity cost in terms of foregone benefits may far exceed whatever compensation may be in long run. Thus, land acquisition indirectly produces substantial income redistribution effects between farmers with and without land acquired. This is based on presumption that farmers can enter land markets and commit land development if their land is not acquired compulsorily. Nevertheless, this indirect income redistribution effect can create serious tension between governments and farmers and impose great difficulties in implementation of land policy and planning (Zaman, 1996; Barrows and Roth, 1990).

Indirect impacts of compulsory land acquisition may also be substantial. Indirect impacts are associated with the way in which the acquired land will be used. It is certain that there is wide variation of environmental, socio-economic, and fiscal impacts of different uses such as open space, development of parks, construction of pipelines, highways and water projects, and establishment of industrial zones. This kind of indirect impacts may exhibit distinguishable spatial patterns. In other words, the extent of impacts decays over distance (Zaman, 1996; Hemadri et al. 1999; Barrows and Roth, 1990).

Social injustice arising from land acquisition is primarily related to inconsistency of compensation in both horizontal and vertical dimensions. The former refers to variations in land acquisition costs from case to case whereas the latter implies differences in compensation over time (Ding, 2004a). Farmers are usually paid higher prices for commercial projects than public projects like airports, highways, and water canals in China. Income and inflation rises fast in countries of rapid urbanization and industrialization. Therefore, variations in compensation levels can be substantial over time (Ding, 2004a).

The ways in which property rights are defined and assigned play a critical role in the efficient and equitable use of land as well as in the transition of land (World Bank, 1997). The United States Constitution (the Fifth Amend-

ment) requires due process and just compensation for land taking. Evolution of property rights such as “partial interests” in land in the USA makes it possible to use property as policy tools for promoting sustainable development (Weibe and Meinen-Dick, 1998). Empirical studies demonstrate that security of landownership has a substantial impact on rural development (Besley, 1995; Feder et al., 1988; Field and Torero, 2003; Alston et al., 1996). It is found that land tenure security can increase the likelihood that farmers will capture the returns from investments and provide legal warranty for transferability of land rights that may improve the creditworthiness of landholders.

In western countries where property rights and markets are well developed, compensation for land acquisition has two components: one is direct compensation and the other is indirect compensation. Direct compensation reflects the value of land taken whereas indirect compensation subsidizes farmers whose retained land is negatively affected. For instance, the New Zealand’s Public Works Act entitles private owners of land to receive compensation for permanent depreciation in the value of any retained land and damage to any land. Permanent depreciation in the value applies to situations where part of land is acquired and the value of rest of the land is reduced by land acquisition action.⁴ This effect is called ‘injurious affection’. Finally, farmers are entitled for compensation even if the land is not taken if public work causes the costs of physical damage to privately owned land. Market principles should be applied to determine compensation, i.e., the value of land is best offering price in the open market by a willing seller to a willing buyer.

Political economy of land acquisition

Pre-reform era

Under the central planning system, governments were in charge of establishing 1- and 5-year socioeconomic development plans that laid 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 considered to be an element of capital investment and improvement (*xiang mu gui hua*). However, since land was neither a commodity nor an asset capable of generating wealth, it was the last factor to be considered in investments and industrial capacity expansion (Ding, 2003).

When socioeconomic development plans called for land development, municipal governments increased their land supply through land acquisition, a conversion of landownership from the collective to the state. In these cases of

⁴<http://www.linz.govt.nz/rcs/linz/pub/web/root/core/CrownProperty/landownerrightsfactsheet/chptr3compensation/index.jsp>.

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*).

It was common for large projects such as highways, railroads, and water projects to leave farmers with no land to farm. In these cases, the agency that had acquired the land from the farmers was responsible for job resettlement, and in the pre-reform era, state-owned enterprises were a dominant component of the labor force. Since output values were given greater weight than net profits in evaluating the performance of these firms, it was easy to place affected farmers in the state-owned enterprises. Job placement was applied to adults whereas children and elders were not considered for these positions.

Although peasants were not paid market prices for their land, they were willing to strike deals with the government agencies. The relocation packages offered them non-agricultural jobs in accordance with the policy specifying that the government agencies purchasing the land should be responsible for job placement and urban *hukou* status. Granting of a city *hukou* was also very attractive and appealing to farmers. A *hukou* was a locality residence license that allowed the *hukou* holder to access social benefits as well as to access local public goods (including schools) and crops at subsidized prices (Ding, 2003). All social benefits and subsidized public goods were geographically bounded. Denying access to public goods and subsidized goods made it very difficult, if not impossible, for people without a city's *hukou* to live in the city. Thus, granting a city *hukou* to affected farmers made them eligible for the social welfare services—medical insurance, pension and retirement plans, high-quality schools, and subsidized agricultural goods—that were commonly provided in cities. Comparing direct compensation package of resettlement, these intangible benefits may be more appealing. This was particularly true in the pre-reform era (before 1978) and in the early years of the post-reform era (after 1978).

Post-reform era

The reform eras started when China adopted the most famous 'open-door' policy in 1978. Since then, reforms gradually spread from rural areas to cities, from markets of consumption goods to input markets (land, labor, and capital), from the state-owned enterprises to institutional and legal systems. Perhaps the most influential reforms that were important to urban and land developments were Constitutional Amendment and development of Land Administration Law (LAL) in 1988 and 1986, respectively.

The compensation of compulsory land acquisition is primarily guided by LAL that was first passed in 1986 and then amended in 1998. In 1986, the LAL followed the old module used in the planned system to guide land acquisition compensation. It contained four main components: land compensation, resettlement subsidies, compensation for young crops and attachments on land, and labor resettlement. Land compensation should be 3–6 times the average annual output value of acquired land in the preceding 3 years whereas resettlement subsidies should be 2–3 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 3 years.

The Law further stipulated that compensation for young crops and land attachment should be given to farmers whereas land compensation and resettlement subsidies should be retained in collective communes that should use funds for development and resettlement of affected labors and assistance for unemployed farmers. Department of Land Management at the county level should be responsible for coordinating acquired communes, organizations or units that use acquired land, and related authorities to resettle affected farm labors. Any units beside ones that use acquired land will be compensated for offering employment opportunities to these affected farm laborers.

The scope of acquisition was widely defined. It should serve the need of land for state construction activities. Since the portion of private economy is relative small, less than one-third in the 1980s, various developments such as infrastructure, expansion and establishment of industrial firms, housing, etc. were all justified for land acquisition.

Rapid economic development and fundamental changes of economic structure prompted the nation to revise laws governing land management. Thus, the 1998 LAL was passed. Comparing to the 1986 version, this amendment is distinctive in three aspects with respect to compensation of compulsory land acquisition. First, it raised compensation levels. Compensation for land should be 6–10 times the average annual output value of acquired land in the preceding 3 years. Funds for resettlement should be 4–6 times the derived land productivity, a quantity determined through the following calculations. First, the affected population is derived by dividing the total amount of acquired land by per capita cultivated land. And then the amount of resettlement subsidies per person is set to equal 4–6 times the average annual output value of acquired land in the preceding 3 years. The total amount of resettlement subsidies per hectare shall not exceed 15 times the average annual output value of acquired land in the three prior years. Upon approval from the provincial authorities, the combined amount of resettlement and land compensation can increase but be no greater than 30 times the derived land productivity if needed to maintain constant living standard for affected farmers.

Table 1
Land acquisition compensation in Zhejiang (2002)

City	Land (ha)	Farmland (ha)	Output value (RMB/mu)	Compensation (RMB/mu)	Farmers	Labor
Xiaoshan	21.445	6.995	2100	83,593	640	399
Yuhang	5.7273	4.2676	1500	28,436	106	70
Jinzhou	37.182	34.611	1927	32,813	952	649
Ninghai	22.929	19.398	1500	32,259	686	454
Linhai	6.7999	2.8319	1533	25,437	183	112
Jiaojiang	37.761	27.873	2100	51,468	1085	692
Longwan	21.111	11.419	2000	29,340	384	269
Ruian	31.266	27.494	1705	34,774	1082	731
Yuecheng	17.487	16.096	1500	31,972	359	234
Shaoxing	34.897	34.897	1307	21,600	795	517
Yiwu	41.087	22.64	1333	26,381	1212	771
Wuyi	32.052	5.39	700	7260	77	43
Longyou	6.6859	4.66	1333	20,310	129	97
Jiangshan	4.4558	1.7974	1626	35,852	246	151
Changxing	2.5225	0.4485	1011	13,897	10	6
Anji	11.056	10.369	950	18,870	232	139
Jiashan	32.771	28.693	1250	19,293	290	189
Pinghu	37.087	32.967	1390	8677	502	288
Zhoushan	3.4776	2.7425	1083	13,639	68	38
Tonglu	1.5754	0.6037	1123	15,675	23	14
Xiucheng	12.181	7.8484	880	39,980	142	92
Total or average	421.56	304.04	1422	28,644	9203	5955

Source: Xu (2003).

Secondly, the 1998 LAL is silent on labor resettlement except it encourages the development of village-owned enterprises. Finally, Article 51 of LAL states that the standard of compensation and resettlement for the requisition of land to build large- or medium-sized water conservancy or hydroelectric projects shall be prescribed separately by the State Council. It requires public interests to justify land acquisition although the definition of public interests is vaguely articulated.

According to these standards, the average land compensation and resettlement subsidies were 20,000–30,000 RMB/mu (1 ha = 15 mu) in the fringe areas of Wenzhou City in Zhejiang Province (Southeastern College of Land Management, 2002).⁵ This average is consistent with results from a 21 county and city survey conducted by the Zhejiang Department of Land and Resources on land acquisition in the first half of 2002 (Table 1). The average compensation level was slightly over 28,000 RMB/mu, 8–10 times of land compensation and 6–12.5 times of resettlement subsidies. Interestingly, for every mu requisitioned, 1.83 farmers lost their land and 0.94 laborers lost the land where they worked. A total of 9203 farmers lost their cultivated land, and 60% of these people were laborers (Table 1). This situation is representative of the impacts of land acquisition on farmers throughout China and in particular throughout the eastern coastal areas where the economy is booming.

Assessment of land acquisition

Positive effects

Land acquisition with land leasing strengthens fiscal conditions for local governments, promotes economic and industrial developments, and encourages and facilitates urban encroachment into rural areas.

Fiscal impacts

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. 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.

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-

⁵One RMB was roughly equal to \$0.121 in 2002 (or \$1 ≈ 8.21 RMB).

Table 2
Land acquisition costs in Anshun City, Guizhou Province in 2001 (RMB)

	Vegetation land	Paddy land	Cropland
Annual output	2400	1800	1200
Land compensation	19,200	14,400	9600
Resettlement subsidies	33,600	25,200	16,800
Compensation for land attachment and young crops	2400	1800	1200
Land management fee	2208	1650	772
Cultivated land occupation tax	6667	6667	6667
Agricultural tax	1000	1000	1000
Vegetation development fund	5000		
Land use rights fee for newly added construction land	9333	9333	9333
Cultivated land exploitation fee	19,200	14,400	9600
Public enterprise fee	2000	2000	2000
Others	1900	1900	1900
Total	102,508	78,350	58,872

Source: Benchmark Price Data of Anshun City, Department of Land and Resource Management, Anshun City (2002).

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.⁶

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 6 billion YMB in 2002, more than 20% of the total municipal government's revenues. The ability for local governments to raise enormous revenues from limited market LURs 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 10 times the total cost of the land.

For instance, in one village in Fujian province, the local government paid about 10,000 RMB/mu to farmers and resold to developers for 200,000 RMB/mu if zoned industrial or for more than three-quarter million RMB per mu if zoned residential (Investigating Group of Ministry of Land and Resources (MLR), 2003). In the

Jianggan district of Hangzhou, land compensation and resettlement subsidies were 120,000 RMB/mu from 1997 to 1999 and then were raised to 160,000 RMB/mu after 1999. The average price of LURs for housing projects was 2–4 million RMB/mu (Xu, 2003). In 1992, the Pudong Development Commission paid farmers 20,000 RMB/mu and then resold the land to developers and investors for at least 300,000 RMB/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 (Joint Investigating Group of MLR, 2003a). 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, LUR fees for newly added construction land, and agricultural tax. These taxes and fees can account for up to 45–55% of total costs of land acquisition and are a significant funding source for governments (Table 2).

Impacts on 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

⁶Development Research Center, 2005: Issues and Challenges of China Urban Real Estate Administration and Taxation, report submitted to the Lincoln Institute of Land Policy.

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 LURs 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 2–3 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.⁷

Impacts on urbanization

Land used for urban development is primarily amassed through land acquisition. A survey of 16 provinces revealed that land acquisition was the main source of the land supply. In a 2-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 MLR, 2003).

Land acquisition policies and practices have also spurred economic development. 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 120 to 340 km² 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 7–8 km²/year in the second half of the 1990s. Hangzhou expanded its built-up areas from 430 km² in 1987 to 683 km² in 1997.⁸

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

Table 3
Shenzhen urban spatial expansion

Year	Built-up areas (km ²)	% Of total areas in jurisdiction
1979	2.9	0.88
1980	3.8	1.16
1981	5.5	1.68
1982	8.7	2.66
1983	10.4	3.79
1984	17.9	5.47
1985	47.6	14.53
1986	47.6	14.53
1987	58	17.71
1988	58.4	17.83
1989	60.1	18.35
1990	69.34	18.4
1998	132.71	40.5
1999	140.59	42.9

Source: Shenzhen Yearbook of Real Estate (2000).

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, the combination of land acquisition and public land leasing generates 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 coastal areas.⁹

Institutional problems of land acquisition

Despite the positive impacts of land acquisition and public land leasing for local government financing, an examination of land acquisition reveals institutional flaws that lead to socioeconomic and administrative problems.

Scope and justification of land acquisition

Institutional flaws stem from contradictions and inconsistencies in the law that governs land acquisition. One of the first problems with the LAL is that it poorly defines the conditions under which rural land may be acquired for development purposes. The LAL stipulates that land acquisition shall be carried out only when the purpose of the acquisition is to serve public interests. However, any individual who would like to build a development on non-urban land, regardless of whether it will serve the public interest, must use state-owned land. This implies that land users, if their need cannot be met by existing urban land, have to seek land acquisition. This inevitably expands the legal scope of land acquisition.

For instance, in the province of Zhejiang, land is acquired for a variety of projects. Basic infrastructure development, such as transportation, energy, and water projects; commercial development, such as industrial and

⁷Data sources.

⁸These data are obtained from the following websites: <http://www.jiaodong.net/2005/1/206231.htm>; http://www.bjcs.gov.cn/jdgz/jdgzDetail.go?lm=llyj&jbshj_id=13789; <http://www.ambiente.gov.mo/schinese/07/lotus08/10812.asp>; http://www.rd.gz.cn/rdh5/meeting/gzinfo/build/index_7.htm; <http://www.hznet.com.cn/kjdt/yjjg/2000/repot1.htm>.

⁹Data were collected and compiled by the author from interviewing local officials from Zhejiang, Jiangsu, Guangzhou, and Henan Provinces.

housing projects; and other projects such as roads, schools, and enterprise establishments have all occurred on requisitioned land (Southeastern College of Land Management, 2002). Although land acquired for basic infrastructure represents the highest percentage of all acquisitions (52%), commercial projects accounted for 22% of all acquisitions in 2000–2001. It is difficult to understand how commercial projects can be justified as serving the public interest.

Fair and just compensation of land acquisition

Many countries, particularly in the west, develop constitutions or laws that require government to compensate farmers based on market values of the land taken. For instance, The Fifth Amendment of the United States Constitution stipulates that “private property shall not be taken for public use without just compensation”. Laws in New Zealand require that farmers shall be fairly compensated for land taken or damage imposed on their land by public action. The just or fair compensation refers to market values of land taken or acquired. Well-defined property rights and functioning real estate markets in these countries ensure just compensation. Lack of such rights and markets make just and fair compensation difficult, if not impossible, to achieve.

In China, just and fair compensation is defined by the LAL in ways that reflect the value of land and be sufficient to warrant non-worse-off living standards for farmers who lose land. However, clauses in LAL fail to give a clear and measurable definition of non-worse-off living standards. Not surprisingly, absence of concrete guidelines for just compensation often results in wide ranges of compensation that seems to be ad hoc and arbitrary for farmers. Furthermore, laws give little consideration to compensation consistency in both vertical and horizontal dimensions. Horizontal fairness implies that land acquisition compensation should be indifferent among different land uses after land acquisition, among different villages, or different land in the same village. Vertical fairness and justice implies land acquisition compensation should be comparable after discounting inflation and social economic growth. Finally, land acquisition may destroy a social network. It is difficult to value this network theoretically and empirically. But this shall be recognized and a certain level of compensation is justifiable.

More specifically, the practice of land acquisition yields injustice and unfair compensation. This can be illustrated as follows. First, transaction of any rights attached to land is prohibited in rural areas since 1949. Therefore, there are no market data to adequately evaluate and appraise the value of farmland. Perhaps it is one of the most challenging and difficult tasks to determine fair compensation that is adequate for maintaining the same living standards in a system without market data. Thus, the annual yield of farmland is used to determine land value, which in turn determines land acquisition compensation. The annual yield is also used to determine minimum income security that land can provide. This sounds right theoretically.

However, pricing policy and government control on farmland uses fundamentally challenge the merits and grounds of the approach. After many years of reforms and rapid fundamental transition toward the market system, local governments still have substantial power in deciding what to grow on farmland (vegetation, crops, rice, orchard, fishery, etc.). With price control and market disequilibrium, annual yield from different uses of farmland can be remarkably variable.

Secondly, pricing policy inherited by the old planned system has artificially suppressed agricultural prices and increased industrial prices to indirectly subsidize industrial development. This is consistent with the phenomena observed in many other developing countries in which industrial and urban expansion was achieved at the expense of agricultural and rural growth. As a result, the prices of agricultural products are much lower than otherwise. The suppressed pricing policy on agricultural goods may partly explain why farmers are not even satisfied with compensation that is 200–300 times the value of annual yield of farmland. This level of compensation implies a capitalized rate of 0.16–0.25%, assuming that half of the output value is accounted for by total farming costs such as seeds, fertilizers, energy, and labor. A capitalized rate this low is very unlikely in any competitive market.¹⁰

Thirdly, the LAL offers inconsistent guidelines for land compensation and resettlement subsidies. Article 51 states that different standards and levels shall be applied for major projects of national interest such as highways and energy development. This policy enables local governments to exercise their political powers to under-compensate farmers for their land. For instance, the construction of the highway from Hangzhou to Ningbo has a segment that runs through the suburbs of Bingjiang district of Hangzhou city. Farmers received 23,100 RMB/mu for their land and land compensation and resettlement subsidies accounted for 29% of total land acquisition costs. In other commercial projects, land compensation and resettlement subsidies cost 200,000–300,000 RMB/mu, a much greater amount than what the law allowed. One village in Bingjiang district lost more than 1000 mu farmland to basic infrastructure development during the 2000–2001 period. Their compensation was 1800 RMB/mu less than average compensation levels in the area, and this discrepancy cost them nearly 2 million RMB in the 3-year span (Xu, 2003).

Examples of inconsistent land compensation and resettlement subsidies may be countless. During the construction of Highway 318 in Sichuan Province, the annual value of farming output in 2001 was 1014 RMB/mu. However, 650 RMB/mu was used to calculate land compensation and resettlement subsidies. For the airport construction in Zhangpu city in Fujian province, negotiated prices for land acquisition were 2000 RMB/mu for paddy rice land and

¹⁰For some cases in Hangzhou City, compensation levels exceed 200,000 or 300,000 RMB/mu where annual yielding is 1000 RMB/mu.

Table 4
Different land acquisition compensation based on land uses (10,000 RMB/mu)

City	National investments on energy, transportation, water projects	Urban basic infrastructure and public projects	Commercial projects	Commercial projects outside planned areas
Shangluo City, Shanxi Province	0.5–0.8	3–5	8–10	3–5
Shangdong Province	0.2–0.7			4–5
Tingyi County, Jiangshu Province	0.5			1.66
Taishang City, Jiangshu Province	0.8–1.2	4–6		

Source: Joint Investigating Group of MLR (2003b), Investigation Report of Compensation and its Calculation of Land Acquisition.

1000 RMB/mu for cropland. These prices were substantially lower than the minimum level specified by the LAL (Joint Investigating Group of MLR, 2003b).

Market values of land are created by society rather than by landowners or occupiers. They are independent of future land uses and largely driven by the derived demand for land. This derived demand is created by economic and urban growths and needs to provide infrastructure and services to support these growths. Therefore, current practice of farming may not be the dominant factor in determining market values of land. The way in which land acquisition compensation is determined does not carry any of these market principles at all, which is not surprising given the absence of markets in rural areas in China. Both current and future (after land acquisition) land uses are key factors (Tables 2 and 4), suggesting the direction of future reform in land acquisition.

To achieve the goal of market value compensation, it is, therefore, suggested that objectives of land policy reform are to promote land markets in rural areas, to introduce land prices into the determination of land uses in both rural and urban areas, and to develop market mechanism in land allocation between urban and rural areas and between uses. In doing so, the ‘best and highest’ principle can be applied in guiding land use and allocation decisions.

Finally, failing to consider regional variations of per capita farmland occupation contributes to the horizontally incomparable distribution of compensation. For example, the amount of farmland per capita is 0.295 mu in the city of Fushan in Fujiang Province, 0.6 mu in the city of Ningbo in Zhejiang, 0.72 mu in the city of Chengdu in Sichuan, 1.065 mu in the city of Xingxiang in Henan, and 3.84 in the city of Shuihua in Heilongjiang. The general geographic patterns of farmland per capita are that it: (1) increases from east to west; (2) decreases with population density; and (3) decreases with land quality. Since farmers’ income from farming is determined by average output value, costs, and farmland per capita, the lack of attention to variations in the number of farmers affected by a land acquisition decreases the likelihood that farmers will maintain their current living standards after land acquisition.

Farmers’ rights and interests

Perhaps one of the most fundamental questions that need to be addressed is the rights and interests farmers have with regard to farmland. There is ambiguity in the LAL in this matter.

There is no clear definition of property rights in the laws governing farmland, village organization, and farmers. Concerns and issues related to property rights and land tenure lead to a more fundamental question: who is entitled to benefit from land development and at what portion? It is common that a certain portion of compensation is retained in each point when funds were distributed downward from high-level governments to low ones (from state to province to city to county to township, respectively) (Ding, 2004a).

The village commune is the basic socioeconomic organization in rural areas, and its largest asset is the land collectively owned by the commune members. The role of the commune is diminishing partly because of the downsizing of its membership through land acquisition (some of farmers become urban residents) and partly because of socioeconomic advance and fundamental transition toward market system. Therefore, the scheme of revenue sharing from land development and conversion should be re-examined.

Nevertheless, it is concluded that a wide variation of cash payments received by farmers has something to do with the absence of clear legal assignment of land rights and responsibility (Joint Investigating Group of MLR, 2003c). A wastewater processing plant in the outskirts of Shanghai needs 124 mu for the total price of 3,080,000 RMB. According to the law, the village as the legal owner of the land receives 40%. The rest of land acquisition compensation is divided between the town government (30%) and the farmers (30%). However, a survey in one of the cities in the eastern coastal areas conducted from 1989 to 1997 indicates that city and town governments received the greatest percentage of the benefits (38.7%) whereas the farmers received 26.7% of the land development benefits. The rest went to the village government (22.1%) and the central government (13.1%).¹¹

¹¹Source: Joint Investigating Group of MLR (2003a).

Negative impacts of land acquisition on rural development

Socioeconomic impacts

Observable evidence of social and economic injustice resulting from the rural land acquisition and compensation process is documented (Ding and Knaap, 2005; Tan and Wang, 2003; Cartier, 2001; Li, 2003). Institutional shortcomings have resulted in several socioeconomic problems. Both horizontal and vertical injustices of land acquisition compensation give rise to increasing social tensions, particularly between local governments and farmers (Ding, 2004a). Therefore, implementation of land policy, planning, and management becomes more and more difficult.

The combination of low compensation and its division between collective communes and farmers makes cash payment to farmers far less than sufficient to guarantee no adverse effects on affected farmers' living. As a rule of thumb, land usually accounts for 10–20% of total land development costs. Referring to this number, land acquisition compensation can be raised because the land acquisition costs take only small portion of total investment of land development. A survey of 12 prominent national projects reveals that land costs, including land acquisition, only represent a small portion of total investments, ranging from 3% to 5% with the lowest percentage at 0.8%. Land compensation and resettlement subsidies account for 40% of the total land costs, and the rest went to various taxes and fees levied by governments. Similarly, a survey by governmental officials reveals that the total costs of land acquisition account for 7–49% of total land conveyance fees (Southeastern College of Land Management, 2002). The sum of land compensation and resettlement subsidies is a portion of the total costs of land acquisition and represents about 50% of the total costs (Table 1).

Pressure of labor markets is increasing with rising population and urbanization. This partially explains increasing reluctance for both local governments and land users to take full responsibility in job resettlement, leaving many affected farmers unemployed. Although Shanghai found jobs for 69,620 farmers whose land was requisitioned in 2000–2001, only 9540 farmers (13.7%) received job placement services from the entity that actually acquired the land. In one village in Zhejiang Province, the land developer recruited 53 farmers only to lay off 35, a lay off rate of 66% (Joint Investigating Group of MLR, 2003d). To make matters worse, a large portion of affected population is aging. For instance, in Zhejiang province, on average, 40% of affected population is over 40 years old.

The tightening labor market has forced the replacement of job resettlement with cash compensation. A survey conducted by MLR in 2002 of 16 provinces reveals that in 60–80% of the cases, cash compensation was used instead of job resettlement. The rate in Zhejiang province was even higher, reaching 94.1%. Although cash compensation seems an attractive alternative to job resettlement, there is no healthy channel for investment and inflation

represents a significant risk that the cash will devalue. In contrast, a farmer's land is not only an income generator but also more importantly a means of life security. Furthermore, the minimum amount of social security payments required to sustain an individual is much more than the compensation received for the land. According to an estimate from the social welfare department of Hangzhou, 60,000 RMB/person is required for a minimum monthly social security payment; this is 2–5 times the average land acquisition compensation per person.

Though both the Chinese Constitution and the LAL require that peasants' lives not be adversely affected by land acquisition, implementation of this requirement is difficult. The lives of farmers are multi-faceted, and monetary payment for lost income represents only one of many elements for which peasants should be compensated. In the absence of equitable land compensation policies, it is hard for unemployed farmers with no land to spend their times in meaningful ways. Furthermore, disputes related to land acquisition have become the number one reason for mounting a court appeal. Nearly half of the cases in Fujian province in 2001 were related to land acquisition, and Zhejiang province had an even higher percentage in 2000–2001. Land acquisition has created and intensified social tension that has quickly spread from rural to urban areas.

Finally, it is becoming increasingly difficult and costly to resettle peasants. The LAL requires that the quality of life of farmers shall not be adversely affected by compulsory land acquisition, but does not specify concrete measures to achieve this goal. As a result, many peasants end up living under worse conditions several years after their land was taken than they did before. This situation is not difficult to imagine. Farming does not make peasants rich, but it generates sufficient income to support a minimum level of livelihood and security. Without appropriate training and skills in managing their lump sum payment and without appropriate investment channels (if their compensation is sufficient to make any investment at all), it is common for peasants to end up with no land to farm, no income stream to support themselves, and no job skills to compete in the tight urban job markets.

Impacts on farmland preservation

Land acquisition has also contributed to the over consumption of cultivated lands. The investment required to purchase and develop this land represents a profitable venture. It is estimated that 200 million yuan (US\$24 million) is needed to develop 1 km² of an industrial zone (Cao, 2004). To fully develop just 10% of these zoned areas, 772 billion RMB (more than US\$90 billion) is required. In some cases, owing to a lack of investments or interest, land is left unused. For example, in the summer of 2004, 24,900 km² of planned development zones were eliminated from the plan, representing 64.5% of the total. More than 1300 km² have been returned to agricultural use (Cao, 2004).

Table 5
Land use and land supply

Land use	Total land	Land requisitioned		Farmland	
		Total land	%	Total land	%
Basic infrastructure	1,166,818.43	813,463.07	69.72	530,498.67	45.47
Public projects	243,369.76	188,136.79	77.30	129,865.42	53.36
Commercial projects	456,387.94	341,771.87	74.89	229,121.98	50.20
Urban and town service projects	314,417.13	197,973.98	62.97	153,824.49	48.92
Agricultural projects	183,785.34	18,916.89	10.29	10,983.61	5.98
Total	2,364,778.6	1,560,262.6	65.98	1,054,294.17	44.58

Note: Basic infrastructure includes energy, transportation, and water projects; Public projects include subsidized housing and urban utility facilities; Commercial projects include industrial, commercial, retail, and real estate uses; Urban and town service projects include roads, schools, and village-owned enterprises in towns.

Source: Joint Investigating Group of MLR (2003a).

Despite these cases of unused land, the expectation of land price increases, impressive revenues from land acquisition and development, and the dependence of local governments on land to finance their administration will continue to provide the incentives to convert farmland until institutional frameworks related to property rights, market development, and taxation and local government financing are improved (Ding, 2004b). In addition, administrative issues such as the lack of fair procedure, public participation, transparency, and a dispute and appealing process will continue to prevent land acquisition from being equitable and sustainable. Until then, as demonstrated in Table 5, various approaches will be taken to achieve the rapid encroachment of urban development into rural areas.

Final remarks

Although land acquisition has represented a financial boon to local governments, the socioeconomic inequity, increasing tension between farmers and the local governments, and excessive farmland consumption associated with the practice of public land leasing demands the reform of the land acquisition system. Various cities have implemented programs designed to achieve reform, and their programs have experienced both successes and drawbacks. These incremental and piecemeal solutions will provide only limited progress until property rights of farmers and village committees are legislatively defined. This identification will provide a definitive answer to the central question regarding the appropriate levels of compensation and lay to rest confusion over how compensation should be apportioned amongst the relevant stakeholders. Therefore, the issues and problems associated with land acquisition will persist in one way or another if the legal and institutional frameworks remain unchanged. And given the Chinese practice of implementing reform in a gradual and incremental fashion, these fundamental legal and institutional changes will take much longer than one would hope.

Although legal and institutional changes represent an essential component of the reform process, additional measures can be undertaken to improve the process by which land acquisition occurs. For example, there is a great likelihood that farmers' preferences will change as their regions become increasingly urban. Local governments should be prepared to adjust policies and programs to correspond with their population's changing needs. In addition, compensation levels will need to be adjusted as the cost of living increases and a once-rural farming population moves into urban areas and require additional resources to finance their new urban lives. Secondly, providing cash compensation to farmers represents a crucial element of the resettlement process; however, additional actions are required by government in order to enable farmers to adapt to their new lives once their land is acquired. Measures must be taken to train migrant workers and provide them with new skill sets so that they can become successful urban workers and provide their families with economic wealth.

Apart from the compensation and resettlement policies, the land acquisition process must also be made more transparent and democratic. If the government takes more of the farmers' interests into account in their decision-making about land acquisition and compensation and improves its method of notifying the farmers as to its land acquisition plans and policies, the farmers will feel that their rights are respected. There is a greater likelihood that the farmers will become a partner in the process and provide the government with the support and cooperation it requires to develop rural lands efficiently and fairly.

In addition to increasing transparency and public participation in the land acquisition process, the government should improve the legal processes that enable farmers to file appeals and protest against governments in compulsory land acquisition cases. Farmers and governments would be better equipped to discuss dissatisfaction with the government's policies and explore ways to make improvements. Some options suggested for the creation of these legal processes are the establishment of local arbitration boards, the provision of

legal aid services for farmers so that they can be prepared to present their cases before formal entities, and the creation of telephone hotlines to receive and process farmers' complaints (Li, 2003).

Generally speaking, issues and challenges raised from land acquisition are quite comprehensive and may not be easy to address. This is partly because these issues are rooted deeply in institutional, fiscal, and administrative frameworks. Property rights in general and rights assigned into land in China, in particular, carry a lot of weight in determining costs of land acquisition. It is interesting to observe how institutional and administrative systems will evolve in China and to document their impacts.

Recognizing issues and challenges that arise from land acquisition, the China government initialized land acquisition reform in 2001 in selected cities (Shanghai, Shuzhou, Wenzhou, Nanjing, Jiaying, Fushan, Shunde, Xiamen, and Fuzhou). Reforms took the following directions: (1) raising compensation level (cash component); (2) granting farmers to control land use and development in retained land; (3) providing social security for farmers of land taken; (4) annualizing payment to farmers; (5) improving administration and process governing land acquisition such as transparency, public participation, and direct compensation to farmers instead of going through village communes.

It may be too early to make a full-scale assessment of these reforms. However, primary analysis reveals that such approaches may not be able to address issues and challenges completely. For instance, annualizing payment requires substantial budget commitment from local government whereas granting farmers rights to control land use and development may not only challenge planning implementation, which presents its own problems, but also impose tremendous costs of infrastructure provision and improvement. An increase in cash compensation may help to reduce social uneasiness, but it fails to address the fundamental issue: the rights and interests of farmers attached to land. Therefore, it is unlikely that many of issues discussed here will be resolved through these piecemeal reforms. A radical and fundamental change such as property rights is required. It is interesting and desirable to research and document land policy reforms and their impacts in rapid urbanization in a country like China.

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