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## Urban Land Issues and Policy Challenges in China's Rapid Urbanization

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**Keywords:** *land issues, policy challenges, unfinished reform, policy dilemma, china.*

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# Urban Land Issues and Policy Challenges in China's Rapid Urbanization

Chengri Ding<sup>α</sup>, Kunzi Cao<sup>σ</sup> & Weixing Gao<sup>ρ</sup>

**Abstract** This paper discusses land issues and attempts to explain why they are persistent and prevalent in Chinese cities. We will demonstrate that the factors behind the land issues include land institution setting, gradualism in reforms, ill-designed policy instruments, one-size-fits-all approaches to land management, a fragmented planning system, and development objectives that are conflicting among themselves at the national level. We then discuss land policy challenges and unfinished reforms that deserve attention. Land reforms underscore the balancing act required between the concerns about the protection of property rights and public interests. They were meant to address the entitlement question of unearned land value increments, minimize social welfare losses in farmland protection, and add planning/policy flexibility to cope with future development uncertainty. Finally, we illustrate the challenges in policy choices and the importance of the political will/determination of top leaders at all levels of government in undertaking radical and fundamental land policy reforms. Political will/determination would be critical in land policy reforms because leaders will face rising political resistance and huge socioeconomic costs.

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## I. INTRODUCTION

Land issues have attracted attention in China in recent decades. Land issues involve social unrest and instability derived from land redevelopment and requisition (Lin et al., 2014; Zhang, 2007), public risks in land-based financing of urban infrastructure (Liu, 2010; Lardy, 2010; World Bank and DRC, 2014; Ding et al., 2014), land speculation and hoarding that cause housing bubbles and skyrocketing housing prices (Du and Peiser, 2014), and chaotic and uncoordinated land development resulting from a fragmented land use planning system (Ding, 2009; World Bank, 2008). The land also links to corruption, fraud, and embezzlement in land management and development. These problems threaten public trust in the government (Wu and Jin, 2009; Zhang, 2007; Lin, 2009). At the same time, land also plays an important role in local (city) economies, public financing, the provision of urban infrastructure, and the privatization of state-owned enterprises (Ding and Lichtenberg, 2011; Lichtenberg and Ding, 2009; Lin et al., 2014; Wu et al., 2014; Zhang, 2007).

The severity of land issues forced the central government (the State Council and ministries) to

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announce 40 measures/directives to address land issues between 2001-2008 (Wu and Jin, 2009). These measures include a new law (Property Law 2007), a constitutional amendment (2004), and executive orders and documents. They cover areas of land development, land markets, land leasing, farmland conversion, land requisition, land speculation, regulation of housing market bubbles, and land financing. However, there are few signs that indicate the effectiveness of these measures/directives in resolving land issues, making one wonder how this has happened in China's centralized and top-down management system.

China is experiencing two development trends that have outstanding implications in terms of land policy. One is the growth of the private sector. In 1978, the private economy contributed less than 10 percent of national GDP; it now accounts for more than 80 percent. In 1978, private owned properties accounted for approximately 7 percent of the urban housing units, but now for more than 90 percent. The protection of the private sector has, therefore, become important in maintaining China's current pace of growth and achieving a sustainable transformation toward a market economy in the long term. The other development trend is a new era of urbanization, as the central government has targeted it as a national growth strategy. About 200-300 million people will migrate from rural areas to cities and towns by 2030, leaving about 30 percent of the Chinese population, mainly youth and the elderly, in rural areas. In the next 20-30 years, land issues thus will continue to dominate public attention as the new urbanization era would fundamentally reshape China city landscape.

The literature covering Chinese land issues is extensive, but few papers have examined China's land issues in a comprehensive way. This paper attempts to answer the following questions: 1) What are issues on land in China? 2) What are the institutional factors that cause land issues to persist and prevail in Chinese cities? 3) What are the emerging land issues as the private sector becomes increasingly important and China enters a new urbanization era under the New Urbanization Strategy adopted by the current central government? And 4) What are the socioeconomic obstacles in China in terms of undertaking land reforms to resolve serious land issues?

The first question will be examined in Section 2, whereas Section 3 investigates factors behind land issues. Section 4 discusses land issues and policy



challenges that will likely emerge as China transforms into a middle-income country. It will also reveal challenges in policy choices and the importance of political will/determination of top leaders at all levels of government to undertake radical and fundamental land policy reforms. Finally, Section 5 provides concluding remarks.

## II. LAND ISSUES

Land requisition has generated a massive number of landless peasants. There were 40-50 million landless peasants in 2011, with an additional three million adding to that total in each successive year. Source: <http://www.caijing.com.cn/2011-08-09/110804337.html>. Land requisition is the main reason that peasants file complaint letters and petitions. For example, land-related disputes account for 40% of total complaint letters and petitions and 60% of group complaints. Source: <http://news.sina.com.cn/c/sd/2013-1014/085128427149.shtml>.

In rural areas, land serves as an economic safety net for peasants. The land requisition may imply a forced migration, creating new urban poor. There are substantial differences between new migrants and incumbent city residents in terms of hourly wages, working hours, housing conditions, access to social insurance programs, and poverty rates (Park and Wang, 2010; Du, Gregory and Wang, 2006).

Chinese cities spatially expand in ways in which scarce land resource is wasted and inefficient land use patterns emerge at an unprecedentedly pace, as illustrated by prevailing spatial development patterns such as over-scale land development projects, excessive designation of development zones, excessive industrial land, and chaotic and uncoordinated land development patterns across Chinese cities (Ding, 2009; World Bank, 2008; Wu et al., 2016). In 2004, the designation of various Special Economic Zones (SEZs) occupied total land of 38,600 km<sup>2</sup>. Lack of investment led to the central government to revoke 24,900 km<sup>2</sup> in SEZs, of which 1,300 km<sup>2</sup> returned to agricultural use. In Beijing alone, the number of SEZs reduced from 470 to 28, and 15 km<sup>2</sup> of land returned to agricultural use in 2008 (source: Beijing government work report, Beijing Municipal Government, 2008). The State Council has investigated 6,024 development zones with a total area of 35,400 km<sup>2</sup> since 2003 and revoked 2,046 of them (Wu et al., 2016).

Land-based public financing imposes a risk and has caused skyrocketing local public debts. Lardy (2010) estimates that total local debts were 6 trillion RMB in 2009. Liu (2010) states that land-based financing of the public sector creates outstanding off-budget government liabilities of more than 30 percent of GDP. Most of the liabilities are associated with land being used as collateral. The land is the main source of off-budget income for local governments. Off-budget

incomes, which are often the source of abuses, embezzlement, and corruption, have different spending patterns from on-budget expenditures and cause efficiency losses in public finance (Ding et al., 2014).

The land is responsible at least partially for housing bubbles in many Chinese cities. Three indicators all point to the severity of housing bubbles. The first indicator is the rising housing price index. In Beijing, for instance, the average price of a new apartment in the inner city was 45,000 RMB in 2013, an increase by a factor of ten compared with the 2004. The second indicator is the ratio of annual rent over housing price. It fell to 3.81% in major cities like Beijing, Shanghai, Guangzhou, and Shenzhen in 2005. This ratio is well below the threshold of 4.5% that is widely used to indicate housing market bubbles. The third indicator is housing vacancy rates. A survey in 2010 by the National Grid Company in 660 cities revealed that 65.4 million new apartments had zero electricity consumption for more than six months. Sources: Economist, May 4-10, 2013; [http://house.ifeng.com/detail/2010\\_03\\_31/10444839\\_0.shtml](http://house.ifeng.com/detail/2010_03_31/10444839_0.shtml); [http://house.ifeng.com/detail/2010\\_07\\_06/11724747\\_0.shtml](http://house.ifeng.com/detail/2010_07_06/11724747_0.shtml). These vacant units could house 200-250 million people, which is equivalent to the predicted number of rural-city migrants in the next 10-20 years. Vacancy rates are at 15-23%, and it would take approximately five years for markets to absorb newly-built housing stock in many third- and fourth-tier cities. A by-product of the housing bubble is land speculation and land hoarding. In the period from 2003-2009, 40 well-known developers had acquired 270 lots through LURs; but more than half of these lots has been remaining idle by the end of the period. Source: [http://www.legaldaily.com.cn/zmbm/content/200911/05/content\\_1177543.htm?node=7577](http://www.legaldaily.com.cn/zmbm/content/200911/05/content_1177543.htm?node=7577).

The effectiveness of land policies, in general, has long been questionable. The Chinese central government has claimed to implement the most rigid farmland protection policies in the world, but studies conclude that farmland protection policies have not effectively slowed down land development (Feng et al., 2015; Lichtenberg and Ding, 2008). China has also introduced intensive land policy directives to resolve land issues. There were an annual 6-7 policy directives and initiatives in the period 2001-2008 (Wu and Jin, 2009). The intensity suggests that the land policy instrument either fails to deliver its promises on resolving land issues or results in unwanted/unexpected consequences that deserve a further policy remedy. One may wonder how this has happened in a country with such highly centralized authority. The following section will address the question.

### III. CAUSES AND FACTORS BEHIND LAND ISSUES

#### a) *Land institution and roles*

China has a unique land institution that helps to create monopolistic situations in both land supply and land demand for urbanization and industrialization. Land development is legally permitted only in urban areas (state ownership), and rural land cannot be developed (collectively owned by rural communes). Land ownership conversion, hence, is a prerequisite for land development. China introduced the Land Use Rights (LUR) system, which is a public land leasing system in which ownership separates from the rights to sell, rent, and mortgage the property, to promote the development of land markets. Land (use rights) transactions between users/developers in land markets are legally permitted after the land is leased out from the State, defining the first-level land markets (Ding, 2003; Lin, 2009).

Under China's land institution system, local governments (cities, counties, and townships) act as the representative of the State in the land requisition and land leasing. This institutional setting enables local governments to exercise their power to obtain land for urban development at low prices and then charge developers high land prices as the sole provider of land.

In one village in Fujian province, for instance, the local government paid approximately 8,700 USD per acre to farmers and then sold the land to developers for over 650,000 USD for commercial housing (Southern College of Land Management of Zhejiang University, 2003). Land revenues become a dominant source of off-budget incomes for local governments. Land leasing in 2006, for instance, generated land revenues of 808 billion RMB, equivalent to 23% of total taxes levied at all levels of government. Since land conveyance fees are retained primarily by prefecture cities (provincial and county governments take a small share, depending on the intergovernmental fiscal arrangement), land revenues become more important to city governments.

The ratio of land (leasing) revenues over tax revenues of subnational governments was 53 percent in 2006 (it jumped to over 84 percent in 2010). Proceeds from land leasing in Beijing and Shanghai, for instance, were equal to 40 and 50% of their total fiscal revenues, respectively, in 2009 (Liu, 2010).

Land issues can be considered to be the costs of land roles. Lichtenberg and Ding (2009) conclude that local officials' seeking of land revenues is a main driver of land conversion. Wu et al. (2014) illustrate that local officials often subsidize industrial land access to attract investment. Ding and Lichtenberg (2011) conclude that land plays an important role in city economic growth because land availability may constrain urban economic growth. Their research suggests that it is the combination of high demand for land and strict control on land conversion that makes the land a critical

ingredient in local economic development policy. Land financing provides much-needed incomes for local governments that faced rising fiscal deficits after the 1993/94 tax/fiscal reforms. City governments employ a land-based infrastructure scheme to fuel rapid urban spatial expansion (Liu, 2007; Lin et al., 2014; Wang et al., 2011).

The privatization of state-owned enterprises (SOEs) is a critical step in transforming China's planned economy into a market one. From 1995 to 2005, about 100,000 firms with 11.4 trillion RMB worth of assets were privatized, representing two-thirds of both the total number of SOEs and total state assets. Source: [http://english.ckgsb.edu.cn/sites/default/files/privatization\\_in\\_china.pdf](http://english.ckgsb.edu.cn/sites/default/files/privatization_in_china.pdf). Most of the SOEs that were to be privatized, if not all, were in serious debt. Active land markets helped local governments to use site values to resolve the indebtedness of the SOEs and resettle their employees. Sources: [http://www.360doc.com/content/11/0901/15/7293128\\_145014585.shtml](http://www.360doc.com/content/11/0901/15/7293128_145014585.shtml); <http://www.chinaacc.com/new/63/74/115/2006/2/zh00591198162260024587-0.htm>. Leasing out the SOEs' land provides much-needed cash for worker buyouts, pension insurance, and debt payments.

The land institution enables local governments to requisition land at extremely low prices, while incentives behind land-based public financing explain their aggressiveness in land conversion. Monopolies by local governments in the first-land markets (public land leasing) generate monopolized land proceeds from land development (land requisition and land leasing). Without the presence of land demand for industrialization and urbanization, the aggressiveness of land conversion inevitably causes the idling of land resources, particularly in the form of excessive industrial land.

#### b) *Designed policy instruments*

A policy should be assessed by examining not only its goals, but also the means and instruments that are chosen to achieve them. In other words, a good one needs to have the right implementation instrument with which to achieve policy goals.

China has adopted a rigid land management system that is distinguished by the following features. First, the farmland policy mandates no less than 80% of farmland to be designated as "basic" cultivated land (in "basic" farmland districts), which is prohibited from being developed unless the State Council issues development permission. The State Council approves land development on "basic" cultivated land for national projects (such as transport networks) as well as for policy initiatives (such as the designation of various economic zones, and demonstration projects for policy reforms). Furthermore, without an effective mechanism by which to differentiate the percentage of "basic" cultivated land across governments, the 80% minimum



requirement is uniformly assigned to all sub national governments.

Second, China adopts a strict implementation of the dynamically balanced farmland policy, which is virtually a no-net-loss of farmland policy and implies that land reclamation is mandated to offset farmland losses due to industrialization and urbanization. Third, China has a vertical land use planning system in which land use and development quotas are allocated through the centralized bureaucratic structure. Land use and development quotas include 1) maximum developable/constructible land in cities and rural areas, 2) maximum developable/constructible farmland, 3) minimum farmland, 4) minimum "basic" farmland, 5) minimum land reclamation, and 6) maximum per capita land consumption for industrial use.

Farmland protection is a legitimate objective and national interest for a country as populated as China to maintain grain self-sufficiency. But the question is how to achieve the goal. There are two approaches, each having different sets of policy instruments. One is through agricultural policy (such as income subsidies for peasants or price subsidies for farming), and the other is through land policy (farmland protection). A fundamental question thus arises: which one is more effective?

In 2004, China introduced several initiatives to provide peasants with incentives to increase grain yields. They included the abolition of agricultural taxes, income subsidies, subsidies for plant seeds and machinery purchases, and increased spending on rural (agricultural) infrastructure (Lichtenberg and Ding, 2008). Grain production responded well to these policy initiatives, even though the amount of farmland was declining at the same time (Li et al., 2014). Furthermore, studies reveal that China's grain output is highly correlated with planted farmland rather than the total amount of farmland (Lichtenberg and Ding, 2008). This says that the food security objective can be achieved through agricultural policies, at least in the short run. Farmland has been continuously depleting in recent decades due to rapid urbanization and industrialization. The total amount of cultivated land was 1.951 billion *mu* in 1996, decreasing to 1.911 billion *mu* in 2001, to 1.824 billion *mu* in 2011. Source: China Land & Resources Almanac. In those 15-years (1996-2011), grain output first fluctuated and then steadily grew. From 2003 to 2011, total grain output rose steadily from 430.7 million tons to 571.2 million tons, at an annual rate of 3.59%. Total grain output reached a historical record 607.1 million tons in 2014. Those data suggest that something other than farmland protection is contributing to steadily rising grain production.

Strict farmland protection policies prohibit land development inside "basic" farmland districts. This policy generates two types of social welfare losses. One loss is related to urban sprawl, i.e., forcing urban

development to leapfrog over protected farmland in urban fringe areas. The other loss is the forgone losses in the land price premium. Land in urban fringes has a much higher land price premium than land further away from city cores. Overall social welfares decrease if the price premium difference between two sites exceeds grain output gaps. In other words, when gains from farmland protection in urban fringes cannot offset the losses in the land price premium, we have a net reduction in social welfare (Ding, 2009). Also strict farmland protection policies make plans for incremental land supply for urban development impossible. As a result, local officials often use large-scale SEZs to obtain approval from the central government to develop farmland to circumvent strict farmland protection policies.

The distinguishing features of China's land system include a standardized and one-size-fits-all management approach, and formula driven policy implementation (Lichtenberg and Ding, 2008, 2009), as indicated by the mandated 80% farmland in "basic" farmland districts. This type of land management may work in small and homogenous places, but not in big and extremely diverse countries in terms of natural endowment, development status, and people-land tensions such as China. For instance, Ding and Lichtenberg (2011) conclude that land is a constraint for development in eastern China, but not in the middle and western areas. A policy implication is that the eastern regions should have different farmland protection standards and more flexible land development quotas than the rest of the country. The one-size-fits-all type of land management did not work out before, does not now, and will not in the future in China.

Local competition causes severe over-capacity in Manufacturing sectors in China (Ding and Lichtenberg, 2011). A quarter of capacity is unutilized in sectors such as steel, electrolytic aluminum, ferroalloy, cement, automobile, shipbuilding, and glass industries, for example. Substantial over-capacity also includes the production of coke, calcium carbide, copper smelting, electric power, coal, and textile goods (Ding and Lichtenberg, 2011). The central government has attempted to use land as a macro policy instrument to 'slow down' the economy and a counter-measure against local competition. In 2004, the State Council issued an executive directory banning all public land leasing for six months. In 2007, the central government used land as a means of macroeconomic adjustment to cool off the over-heating capital investment that threatened the national economy (Wu and Jin, 2009). Macro-economies should be adjusted through fiscal, tax, credit, and monetary policies (Ji, 2010). It is not surprising, however, to see that the land-based macro-policy to resolve over-investment in manufacturing was short-lived. Policy instruments are vital for achieving policy objectives. Unwanted consequences arise when

inappropriate or incorrect policy instruments are used to achieve well-justified policy objectives.

c) *Local officials' incentives behind land development*

i. *Fiscal decentralization*

Land issues may not be fully comprehended without understanding China's fiscal decentralization and cadre evaluation, both of which greatly affect local officials' behaviors toward local economic growth. China's economic and fiscal decentralization has fueled its remarkable economic growth during the pro-reform period, but with huge costs. The unwanted consequences of fiscal decentralization include local competition that often leads to over-heating economy, the state's weakening fiscal control, and a race to the bottom in terms of tax incentives and subsidies used to attract businesses and investments (Shick, 2007; Afono and Furceri, 2009). Off-budget activities often rise along with fiscal decentralization, particularly when local governments face tight budgetary constraints. The downside of off-budget incomes includes distortion of supply and demand in the local economy, erosion of fiscal control, and damage to the effectiveness of government budgeting (Bennett and DiLorenzo, 1982; Schick, 2007). Off-budget activities also undermine the role of budgeting in managing the economy and formulating public objectives and priorities as they tend to weaken the government's fiscal control (Schick, 2007). On the positive side, empowered by off-budget incomes, local governments have a larger fiscal capacity with which to promote local economic growth than they otherwise would (Ding and Lichtenberg, 2009). China has extremely large off-budget revenues. Land revenues are the most important source of off-budget incomes for subnational governments in China. They were equivalent to 38.9% of the total fiscal revenues of subnational governments in 2006. Intergovernmental transfers contribute 45% of total fiscal revenue, on average; this translates to ratios of land revenues to tax revenues for subnational governments of as high as 0.7 (Ding et al., 2014).

ii. *Cadre evaluation*

China has established a cadre responsibility/evaluation system with which to build a civil service society as part of its modernization propaganda. Although the principal criteria of cadre evaluation are formula driven and there are other elements/factors in addition to economic performance, work achievements account for 60-70% of the score received. Work achievements are mainly measured by indicators of GDP growth and tax revenues, which are then used by human resource departments to determine the turnover/promotion of local leaders (Landry, 2008; Whiting, 2004).

iii. *Government-led growth model*

Investment is a driver for economic growth in China (Ahuja and Nabar, 2012; Zhu and Kotz, 2010). In 2100s, about one-half of the growth in GDP was attributed to investment (Ahuja and Nabar, 2012). The ratio of gross fixed capital formation over total GDP reached a historical high of 44% in 2004. This investment-driven economic model causes the over-designation of development zones and excessive industrial land (Wu et al., 2014, 2015; Ding, 2009), both of which in turn produce over-capacity in manufacturing. A concern is that the investment-led growth model is seldom sustainable in the long term. As experienced in many countries, including Japan, South Korea, Thailand, and Indonesia, a period of exceptionally high investment precedes macroeconomic instability and a serious setback for growth (Garnaut and Huang, 2005). Theoretically, negative consequences of an investment-led growth model include: 1) diminishing returns to incremental investment imply that resources will be used more efficiently if they are allocated to alternative uses, 2) excessive production capacity across the economy, 3) a high element of speculative activity, and 4) international tensions rise when it is closely associated with international trade which generates pressure on employment in other economies (Garnaut and Huang, 2005).

Weak domestic consumption makes Chinese governments to over-depend upon investment for growth. Private consumption remains weak despite the fact that China has the largest domestic consumer market in the world. In 2013, for instance, China's household consumption was only 34% of its GDP, much lower than that of the US (70%), Japan (61%), Germany (57%), and South Korea (52%). Source: <http://www.stratfor.com/analysis/urbanization-and-demographics-could-skew-chinas-economic-rebalancing-#axzz3H98b6Zrk>. The central government has undertaken enormous efforts to abandon the government-led growth model. Initiatives to boost domestic consumption, for instance, include financial liberalization, expansion, and modernization of the logistics industry, social security and health insurance programs, and the higher education system. But these efforts have generated few results.

Local competition, the performance-based cadre evaluation, and the government-led growth model all contribute to persistent and prevalent over-capacity in the manufacturing sectors. Land issues, in one form or another, may continue to pose a threat to China's sustainable growth unless China finds ways to address the unwanted consequences of fiscal decentralization, shifts its focus in cadre evaluation away from economic growth performance, and finds alternative growth engines to the government-led model.

iv. *Rigid and fragmented planning system*

China's planning system share blames for development challenges around land. First, planning practices have paid little respect to both emerging markets with growth uncertainty and the price mechanism in land-use decisions. In effective land markets, cities with larger populations tend to have a higher population density, implying smaller per capita land consumption. However, the Ministry of Housing and Urban-Rural Development sets a standard of land consumption in Chinese cities at 60-120 m<sup>2</sup> per capita and links city size to land development density in a positive way. For instance, Beijing is larger than Luzhou city (Sichuan province), which is larger than Liangjin town in Huizhou city (Guangdong province). But their planned land consumptions per capita are 105 m<sup>2</sup>, 100 m<sup>2</sup>, and 94.5 m<sup>2</sup>, respectively, which implies higher density in smaller cities.

Second, land policy and planning are rigid. Land use/development quotas, the dynamic balance of farmland, and floor-area-ratio (FAR) are all fixed in planning horizons of 15-20 years, leaving no room for local governments to deal with future development uncertainty. In response, local governments attempt to maneuver politically, whenever possible, to obtain permission to launch large-scale land projects, through the designation of Special Economic Reform and Industrial Districts. In many cases, these projects are unnecessarily large, wasting land resources (Ding, 2009). Another example of this rigidity is the configuration of highways, in which some land hold-outs stand right in the middle of the road, blocking traffic flow, as peasants ask outrageous compensation for the requisition of the land. See <http://news.nationalpost.com/2012/11/22/in-one-chinese-province-the-government-literally-paves-a-highway-around-homeowners-who-refuse-to-move/>. However, just a little flexibility in highway planning can avoid this type of problem and, at the same time, send a message of unacceptability of peasants' requesting unjustifiably high prices for land requisition.

Third, blueprints for city development are shaped by a fragmented planning system, in which three plans are the most dominant and each of these determines one of three market elements: population (laborers), capital, and land. Those three plans jointly determine location patterns and intensity of land use, which in turn affect city competitiveness and urban spatial efficiency ((Bertaud and Malpezzi, 2003; Rosenthal and Strange, 2003). The three plans are: 1) the economic growth and social development plan (EP), 2) the urban master plan (UP), and 3) the land master plan (LP). The EP is developed and administrated by development and reform commissions, UP is developed and administrated by departments of urban planning, and LP is developed and administrated by departments of land and resources. Beside administrative

fragmentation, these three plans are also fragmented in the following ways:

Planning contents are fragmented, encouraging planning failure from the outset. The EP determines fixed capital investments, including for both infrastructure and land development for different uses. Total land supply is determined by the LP but is affected by land development intensity (floor area ratio), which is separately by the UP. The EP determines a city's size in terms of population, which in turn affects total demand on public goods and services, which are separately decided by the UP.

Planning horizons are fragmented, making the whole planning system look awkward. The EP has a five-year planning horizon, whereas the UP has a 20-year and the LP has a 15-year window. China's Constitution mandates that both the UP and LP are subordinate to the EP.

Planning approval authority is fragmented, making it difficult for city governments to be held accountable for their decisions/actions in land development. The EP is approved by the People's Congress of the city, while the UP and LP are by either the State Council or the provincial government, depending on the city's administrative status and size. The State Council approves UPs for 53 cities in which they also have the authority to make local laws, plus 33 other large cities, and provincial governments approve the UPs for the remaining cities. The State Council approves LPs for cities with more than one million inhabitants, while provincial governments approve LPs for smaller ones. Thus, there are cities whose EPs are approved by city congresses, while their LPs are approved by the State Council, and their UPs are approved by provincial governments.

The failure of China's rigid and fragmented planning system is not a surprise, as evidenced in the frequent revision of plans. Beijing's 1982 Urban Master Plan with the planning horizon to 2010 was revised in 1992 with the planning horizon to 2020. Beijing's 1992 Urban Master Plan was modified again in 2004. China's fragmented planning system has become an institutional barrier for city governments to work with market forces and price mechanisms and promote sustainable urban spatial development. Top-down planning approval undermines the principles of spatial mobility and concentration of labor and capital, as well as the market determination of land use intensity (Ding, 2009; Bertraud, 2007).

Moreover, the LP and UP have their fundamental flaws in directing the development of efficient urban spatial patterns. The LP focuses exclusively on farmland protection and pays little attention to the opportunity costs and socioeconomic consequences of protecting farmland on urban fringes. Chinese urban planning is full of dreams for an utopian city and is responsible for over 100 ghost cities full of

failed idealistic development. Source: <http://www.worldpolicy.org/blog/2016/06/10/talking-policy-michael-jlewis-utopian-cities>; <http://www.demagazine.co.uk/architecture/why-utopian-urban-developments-never-work>. Plans are never perfect and things always go wrong. Future uncertainty should be a norm during China's rapid urbanization and dramatic transformation toward a market-based economy. Therefore, it is essential for planning to be flexible to stay ahead of market trends and competition.

d) *Land policy conflicts with other national goals*

An overarching purpose of the land policy in China is to protect farmland to maintain self-sufficiency in grain production. Even though China has adopted, self-claimed, the most rigid land management system in the world to achieve it, there is little sign that land conversion has slowed down (Feng et al., 2015). Local governments are criticized for their failure to help the central government to achieve the goal of grain self-reliance.

It is true that local governments have a strong incentive to pursue land development, which then becomes a root cause of land issues. What is overlooked in the literature, however, is that the conflicting objectives of the central government are responsible for the failure of land policy. For instance, successful execution of the 2008 Beijing Olympic Games had both symbolic value and substantive importance to the central government, as the Games became a showcase for the world of China's rising status and supreme identity in international affairs. This one-time goal easily trumped that of the farmland "dynamic balance policy", which is the no-net-loss of farmland policy. By 2009, Games-related land development contributed significantly to the depletion of the total land use/development quotas for Beijing for the planning period 2004-2020.

Both housing and infrastructure development have proven to be much more important than farmland protection. In responding to rapidly rising housing prices, the central government to introduce an ambitious public housing program, by pledged to build 5.8 million units of public-assisted housing in 2010 and another 10 million units in 2011. Most public housing projects are constructed on farmland. The rapid development of the national transport network (highways and railroads) has also contributed to farmland depletion. The first high-speed railroad in operation was the Beijing-Tianjin line (opened in 2008), only 120 km long. By 2013, the total length of operating high-speed railroad lines was 11,152 km. The pace of highway development is equally impressive. There were approximately 500 km of highways in 1990, which increased to 15,900 km in 2000, and 74,100 km in 2010.

The national policies that implicitly or explicitly conflict with farmland protection also include maintaining a high rate of economic growth and promoting harmonious growth between the environment, economy, and society and between cities and rural areas (World Bank and DRC, 2013, 2014). China needs high economic growth rates to alleviate employment pressure and reach the goal of a middle-income country by 2020. Toward the building of a harmonious society, the central government provides subsidies to promote reversion of farmland to pasture, grassland, and forest in ecologically vulnerable regions. Those conversions accounted for approximately 50-55% of total farmland loss in the period 1998-2003, compared with a 20% loss due to urban construction in that same period (Ministry of Land and Resources, 2005).

In sum, China's challenging land issues occur for following reasons. First, the land plays too many functions/roles. The land is not only a core policy instrument for farmland protection, but it also plays important roles in city economic development, public financing, and land supply for industrialization. Second, the land links two development frontiers: one is urban and the other is rural areas. Third, the land is saddled with conflicting development objectives or placed between opposing forces. Figure 1 illustrates that land is a link between rural and city areas (through land requisition and landless peasants), and sandwiched between food security and urbanization and between economic growth and environment protection (competing uses of land and conflicting goals). The land is also caught between two conflicting roles of government: property (land) rights protection versus public interest in land (see Section 4.1). Finally, the land is a large part of the question: 'Who is entitled to the unearned land value increases as a result of urban growth?'



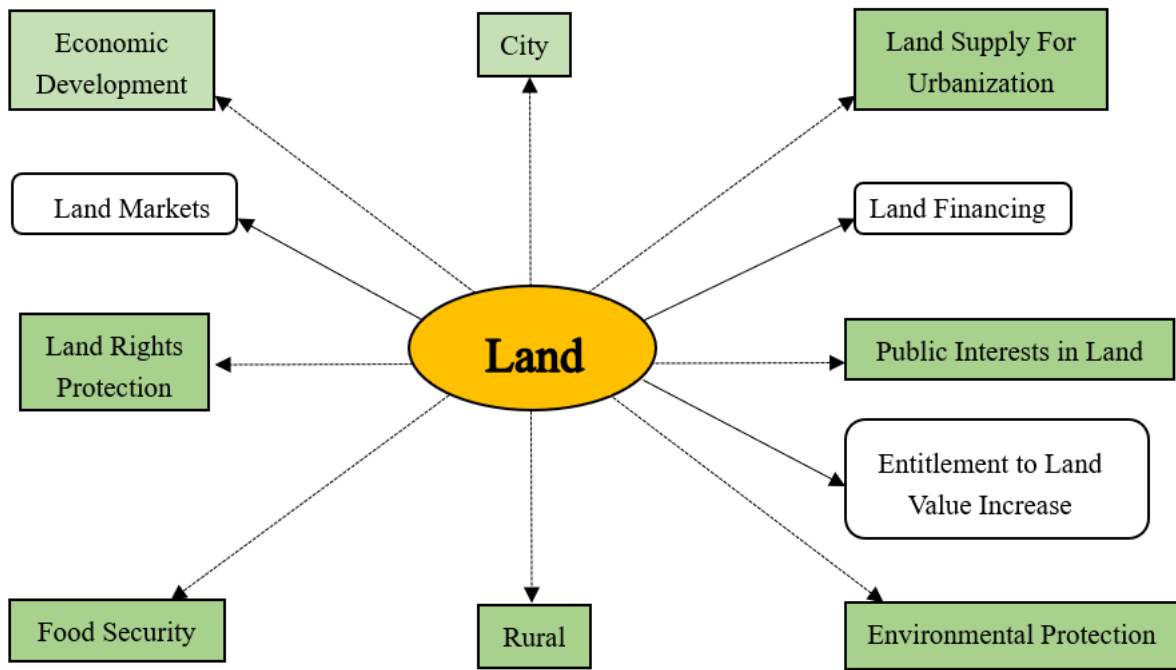


Figure 1: Land as a Platform for Multiple Functions/Development Objectives

#### IV. LAND POLICY CHALLENGES

##### a) *Unfinished land reforms*

The land has been at the center of hot public debates. Well debated/discussed land issues have involved land rights, land property protection, tenure security, land requisition, farmland policy, land markets, land leasing, land finance, and the socioeconomic impacts and consequences of land policies/institutions. Persistent and prevailing land issues suggest that China has a long, challenging journey ahead of land policy reforms. The following questions will continue to dominate public debates and discussions: How to (re)-define public interests to justify land acquisition? What are farmland values and how do they change over time? Who (peasants or local governments) is entitled to a portion of the value increases in farmland under development and how large a share should go to each stockholder? In other words, what is the peasants' fair share of value increases? What are peasants' constitutional rights on land property? What are the economic impacts of urbanization and provisions for infrastructure on farmland? Should farmland value increase due to public actions be captured, and, if so, what is the best way to do so? How best to accommodate land demand due to urbanization and industrialization while protecting farmland for environmental and grain autarky reasons? How best to protect public interests in land? What are the alternatives to land financing and land-based infrastructure financing? How should land markets that cross urban-rural boundaries develop?

This list of questions is by no means comprehensive. Land requisition requires the justification of public interest, but the definition of public interest is too broad in Chinese laws. As the private economy continues to thrive, a more fundamental question emerges, which is whether or not a public interest can justify the land requisition for the development of the private economy. If the answer is not, then how should the Chinese government supply land to boost the private sector, which is vital for the Chinese economy? Currently, the land requisition is the only way to accommodate the need in both the private sector and public projects. Fundamental reform in the land requisition is necessary to recognize the rights and interests of peasants over land development in rural areas.

##### b) *Emerging challenges*

There are land issues that have not yet been addressed adequately in the literature. The first issue is the conflict between land rights protection on one side and public interest in the land on the other. Public pressure to protect private rights and interest will continue to rise along with the growth of the private economy and housing development (World Bank and DRC, 2014). At the same time, the government also needs to protect public interests in the land since 1) it is the state's asset, and 2) the government needs to access it for public projects. Civilized governance of urban development requires the government to develop institutions to balance these two sides. Unless such institutions are put into place, any policy initiative moving in the direction of offering more protection on land rights may generate unwanted consequences with

high socioeconomic costs and could lead to social unrest, as evidenced by land hold-outs. Institutions should be established to ensure a fair mechanism with due process for both farmers and local governments in land use, land development, and land requisition. The occurrence of nail houses implies that China is lack of a due process mechanism in the land requisition.

The second issue is the question of who is entitled to unearned land value increases and how much should be given out to each affected party/stockholder. Land values have increased remarkably in the past two decades. Both planning and provisions for infrastructure increase land values substantially. Urban theory suggests that increments in land values due to public actions should be taxed away to recoup government costs for the provision of infrastructure. Empirical studies have concluded that windfall gains in land value that fall to private owners could pay off the capital costs of infrastructure construction (Batt, 2001). Policy instruments of value capture include betterment taxes, tax increment financing, joint development mechanisms, and property taxes. Unfortunately, little attention has been drawn to this important issue of land value entitlement as well as to the related social justice question (the number of windfall gains cases in the land requisition given the scale and pace of urban development throughout Chinese cities).

The third problem relates to the site values and opportunity costs of farmland protection. The physical quality of farmland is the primary factor in the geographical determination of the boundaries of "basic" farmland districts. Site value for alternative uses is seldom considered. It is necessary to fully assess the costs and benefits of farmland protection when designating "basic" farmland districts in order to maximize social welfare.

Finally, the "New Urbanization Strategy" represents another set of challenges. The "2014-2020 National New Urbanization Plan" (NNUP) aims for 60% of China's population to be living in an urban environment by 2020 and 70% by 2030. Accordingly, 200-300 million rural residents will move to cities and towns in the next 10-20 years. A fundamental question, therefore, is where and how to house and employ those enormous rural-urban migrants. According to the NNUP, the New Urbanization Strategy encourages population growth in small cities (less than half a million in population), which have been chosen by the central government as the growth poles in next 10-20 years, and, at the same time, discourages or controls growth in super-large and mega-cities (mega-cities have more than 10 million population). Two specific means have been introduced to implement the new urbanization strategy. One is to offer rural migrants a city *hukou* in small cities and to control the growth of *hukou* residents in super-large cities. The other is to differentiate land development quotas by city size. New land construction

quotas or permits are negatively correlated with city size; at the lowest end, a zero-new-land construction quota is mandated for super-large or mega-cities.

The New Urbanization Strategy (NUS) would be unsustainable and make it more challenging to resolve existing land issues, such as land-based public financing. Local governments, especially those of small cities geographically located in the interior and separated by a distance from overseas markets, lack both locational prospects as manufacturing bases to offer employment opportunities for migrants and the fiscal capacity to provide urban infrastructure and services for planned population growth. Also local governments will be required to spend more on the social services essential for helping workforces manage the social and financial requirements of caring for elders. Public spending pressure is rising with China's demographic trends, which feature an aging population, and a shrinking workforce. The share of the population aged over 60 years over the total is approximately 15%, at present. It will increase to 25% by 2020 and continue to grow beyond 2020. At the same time, the working-age population (aging between 20 and 59 years old) is projected to decline by 80 million between 2015 and 2030. Large cities tend to mass un-proportionally economic wealth and attract high-value-added manufacturing and high-end service industries. Consequently, small cities have no viable options other than land financing to generate public revenues.

Furthermore, the NUS may misallocate land resources among cities. Demographic trends imply that China will need to increase worker productivity significantly to sustain growth rates at even half of the present levels. Given the relatively low productivity levels of many Chinese industries, gains in productivity can be (at least partially) achieved through focusing on the 'top' end of the value chain and incorporating advanced technology. These gains will require substantial improvements in education and skills training, increased market competition, promotion of greater freedom of movement for labor, and increased financial support for small businesses. Large cities and megacities will have comparative advantages in increases in labor productivity because of their concentration of human resources. Growth potential thus may be present in large cities but not in small ones. This suggests that the land market distortion caused by the NUS, which allocates land development/use quotas by city size, leads to both excessive land demand (in large cities) and excessive land supply (in small ones).

### c) *Challenge in policy choices*

China's future transformation will be influenced by emerging markets, a rising awareness of private rights and interests, the dominance of the private economy, diversification of interest groups, and increasing pressure on governance by the rules and

laws decreed by the central government. As a result, future land reforms will incur outstanding socioeconomic and political costs. High socioeconomic costs will be associated with the redistributive effects of land reforms and forgone benefits attached to the status quo. High political costs will arise when interest groups become stronger and civilized local governance takes shape (implying that individual rights and interests will be increasingly recognized and protected by laws and social disputes settled in due process). All of these suggest prolonged and costly procedures in planning and policy discussion/processes and enormous challenges in changes to the status quo. Overcoming the status quo requires strong political will and determination/commitment at all levels of government, including the central and subnational, to undertake land policy reforms that may have outstanding and foreseeable socioeconomic costs but marginal and intangible socioeconomic benefits in the short run. The most challenging policy choices include the development of rural-urban integrated land markets, soft-landings for housing bubbles, and land financing reform.

#### i. *Land market development in rural areas*

Dichotomous land markets are a key factor in the rising urban-rural inequality that threatens sustainable growth in the long run (Jin and Lee, 2013; World Bank and DRC, 2014). It has long been proposed to develop rural land markets in such a way that collectively-owned land used for construction will be subject to the same rights in terms of leasing, transferring, mortgaging, and shareholding of use and development rights as state-owned land in cities and towns (World Bank and DRC, 2014). In 2013, the central government called for an integration of urban and rural construction land markets so that use rights would no longer be differentiated between different land ownerships (state owned vs. collectively owned) in market transactions. This call will create land markets for construction land in rural areas but still, deny land markets for land conversion.

This move is in the right direction. Little progress, however, has been made so far. The reason for this is twofold. First, there is great concern that, in opening up land markets in rural construction land, a new wave of housing construction will follow and greatly enlarge the already severe housing bubbles that, once 'busted,' could have catastrophic consequences. In 2011, Beijing had more than 1,500 km<sup>2</sup> of construction land in rural areas, which was larger than its built-up area of 1,425 km<sup>2</sup>. Second, local governments are reluctant to develop markets for rural construction land mainly because that will undercut the potential revenue from land leasing in cities and towns.

China has launched a policy experiment concerning rental housing development on collectively-

owned rural land. Although this is a baby-step in developing integrated rural-urban land markets, it is the right direction to take in land policy reform and may have profound impacts on China's urbanization in the next 20-30 years.

#### ii. *Housing bubbles*

The housing purchasing restriction policy was first introduced in 2010. It stipulates that city residents with more than two apartment units cannot buy a new one. Since then, the 72 largest cities have adopted this policy. In 2014, with the exception of four cities (Beijing, Shanghai, Guangzhou, and Shenzhen), all 68 of the remaining ones abolished the purchasing restriction policy. There is no market indication, however, suggesting that housing bubbles have vanished or evaporated. Quite the opposite, vacancy rates across these Chinese cities are still increasing, and the housing bubbles are just getting larger.

Why has the central government allowed cities to abolish the purchasing restriction policy at the risk of an even larger bubble? A possible and reasonable explanation is that it must have other concerns that are more urgent than the perceived risks of a housing bubble. These concerns include the slowing of economic growth, high unemployment pressures, declining public revenues, and potentially high inflation.

The housing and real estate sector remains to be a very important contributor to the national economy. In 2013, value added in the real estate sector accounted for 5.9% of GDP, while taxes from real estate development and housing property contributed 19.8% of total tax revenues. Source: [http://city.ifeng.com/a/20141028/414462\\_0.shtml](http://city.ifeng.com/a/20141028/414462_0.shtml). In the absence of other drivers of economic growth, the central government has maintained its reliance on housing development to boost economic growth and absorb new graduates. Without alternative drivers of economic growth, the central government seems to have no choice but to rely on the land-led growth model. The risk of a 'hard-landing' for the housing bubble increases, which would imply catastrophic and long-lasting impacts on the economy.

#### iii. *Land finance*

The potential risks associated with land-based public financing are understood, and there have been many calls for reform. A challenging obstacle, however, is the size of land revenues, which cannot be replaced by any single alternative tax/fiscal instrument. In 2013, total land conveyance fees were 4.1 trillion RMB, which was nearly 60% of the total revenues of sub-national governments (including provinces, cities, counties, and towns). Since land conveyance fees are generated by and retained in cities, cities' dependence on land revenues for public finance could be much larger than the aggregate data suggested. Given the size of land revenues, the only feasible way to address the land

financing issue is to undertake a comprehensive and radical fiscal and tax reform, similar to the 1993/94 one that restructured tax entitlements and spending responsibilities of local governments.

## V. FINAL REMARKS AND CONCLUSIONS

Unlike Western countries in which land policy, management, and planning are local affairs, land use is at the national policy agenda level in China. Land use is instrumental as a policy measure not only for the national objective of food security but also for macro-control and management of the national economy. The land is at the center of the conflict between the central government's goals of equitable growth and social harmony at one hand and local economic growth and cadre evaluation at the other. The land will continue to command attention partly because the land institution in China has not been restructured to line up well with the dramatic economic transformation toward a market economy and partly because there are the internal conflicts between development objectives.

Moving forward, China needs to undertake fundamental land reforms that should be comprehensive in contents, radical in restructuring of institutions (abandoning the duality of rural and urban land tenure systems, reducing over-dependency on land revenues, and integrating rural and urban land markets), and part of a dramatic administrative reform (consolidating fragmented departments). The land reforms should be unfolded along three frontiers. The first is in the land arena itself, such as challenges in land tenure, land requisition, land markets, value capture, and so on (see Sections 4.1 and 4.2). The second frontier refers to broad institutional changes, such as fiscal/tax reform, which should redefine intergovernmental relationships between central and subnational governments, and between subnational governments, as well as rural-urban land market integration. These institutional changes will have profound impacts on how urbanization will take place, and how the modernization of China will unfold. The third frontier should focus on administrative reform. An administrative reform in terms of consolidation of departments (merging several departments) was attempted in 2008, but a little progress has been made since. At the local level, cities such as Shenzhen and Shanghai combine the department of land and resources and department of urban planning into one department, which is the future direction that reforms should take. However, consolidating and integrating administrative departments at a city level only is unlikely to produce wanted results and deliver targeted promises. As China transforms its economy into a market economy and strives to build a harmonious society, it becomes increasingly important to promote synthesized policies and development objectives across authorities and government branches.

Land reform should aim at the realignment of the division of labor between markets and the government. To achieve the goal, price mechanisms and market principles should play an important role in the decisions of land management, use, and development. Standardized, formula-driven and one-size-fits-all approaches in land management are ad odd with market principles, and have not worked out at all. Flexibility and locality-orientation/focuses thus should be a norm in land management and policy, while land development process should be transparent, and officials should hold accountability for local decisions on land development and uses. At the same time, land reforms should focus on land institution that provides protection of land property rights and tenure security, as well as the reduction of government intervention in local decisions regarding land uses and development.

China's success in the past decades has something do to with its gradualism in reforms. It is attractive to policymakers because of its limited objectives, relatively easy implementation, and manageable risks and consequences. More importantly, piecemeal reform seldom threatens the stability of a political system or results in socioeconomic shocks. See <http://www.wilsoncenter.org/publication/155-shock-the-apy-latin-america-russia-and-eastern-europe> for details. In the short run, China's case may support piecemeal reforms. In the long run, whether or not the same assessment will be reached is an open question. For instance, Phan and Cox head (2013) conclude that there are huge costs associated with incomplete reform in Vietnam, while the OECD (1995) has recommended that comprehensive reform generally works better than piecemeal reform. As China has transformed since the open-door policy in 1978, fundamental and comprehensive reforms are urgently needed now. As China becomes a middle-income country with rapidly forming interest groups, political obstacles to comprehensive reforms may never have been so strong. Therefore, if China undertakes comprehensive reforms, how far they will go and how successfully they will be, will largely hinge on the political will of the top leader(s). It will be interesting to observe how land policy reforms will unfold as China has launched an ambitious, renaissance journey.

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