

# MAKING LAND FLY:

## *Land Quota Markets in Chinese Urbanization*

+ YUAN XIAO

### ABSTRACT

This paper investigates China's land quota markets, a recent land policy innovation that virtually transfers urbanization permission from the countryside to cities. Local governments have created new land quotas by demolishing sparsely located farmhouses, and resettling peasants into high-density apartments. These quotas are then sold in new land quota markets to real estate developers. I find that China's land quota markets alter the traditional calculus of location and land use theory: the rural hinterlands have suddenly become valuable to urban land markets. These dramatic changes are the result of reconstructing property rights in land. The quotas traded on the market are a right to convert land use from rural to urban, separate from development rights to invest in specific properties. These institutional changes were initiated by recalibration of intergovernmental relationships: the Central Government delegates more autonomy to local governments and the municipality centralizes control over land by subordinating district and county governments. The implications of the new land quota markets are profound and many. They further draw land resources away from rural areas to urban areas, and reinforce the imbalances between big and small cities. The impact on peasants is rather mixed, and depends on the locations of the resettled peasants.

### CONTACT

Yuan Xiao  
Columbia Law School  
[yxiao@law.columbia.edu](mailto:yxiao@law.columbia.edu)



NYU

Marron Institute  
of Urban Management

## I. Introduction and Motivation of Research

On December 4, 2008, in Chongqing, a metropolis in Western China and also the largest municipality in the country, a special kind of auction was going on. Real estate developers were raising bids for something called “land quota certificates.” After the first developer won the bid, people in the room gave “thunder-like” applause. Among the clapping audience were the Mayor and Deputy Mayor of Chongqing, and more importantly, the Party Secretary of Chongqing who was also a member of the Central Politburo of the Communist Party of China, Bo Xilai, and Deputy Minister of Land and Resources of the Central Government, Lu Xinshe.<sup>1</sup> What is a “land quota certificate”? Why has it attracted such high-level political attention in China?

A land quota certificate represents a recent land policy innovation by Chinese local governments. Real estate developers holding land quota certificates can use them to convert agricultural land into urban development projects. But to create this certificate involves a drastic process of densification in the rural areas. Sparsely located farmhouses are demolished, and peasants resettled in high-density apartments. The reduced built-up footprint in rural area is then turned into a “quota” and transferred to the urban area. Such a transfer does not trade actual land parcels, but rather virtually transfers development permission from the countryside to cities. The spatial mechanism of generating quotas in rural areas and using quotas in the urban fringe is illustrated in Figure 1. The local governments have established a new market, the land quota market, to facilitate the exchanges.

---

<sup>1</sup> Author Unknown. 2008. “Chongqing Nongcun Tudi Jiaoyisuo Guapai Chengli [Chongqing Rural Land Exchange Established] .” *Chongqing Chenbao [Chongqing Morning Post]*, December 4. [http://cqcbepaper.cqnews.net/cqcb/html/2008-12/05/content\\_290252.htm](http://cqcbepaper.cqnews.net/cqcb/html/2008-12/05/content_290252.htm).

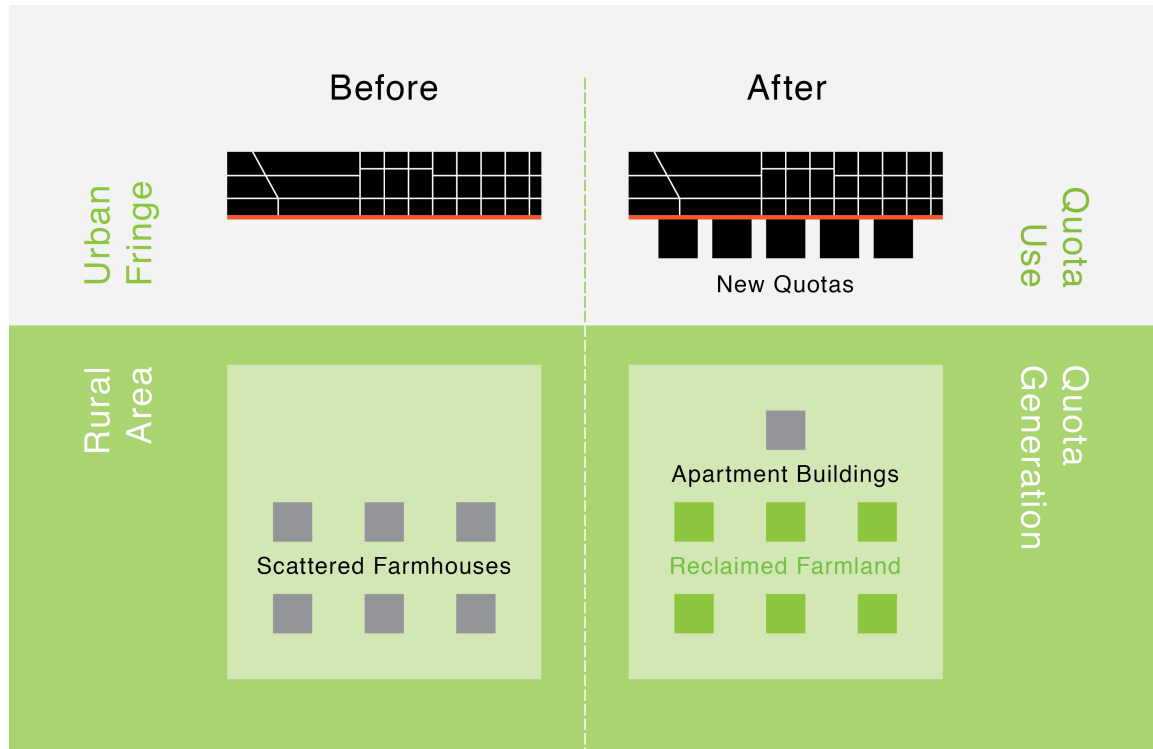


Figure 1 Spatial Mechanism of Quota Generation and Quota Use

This high-profile experiment has attracted wide attention. Local governments of pilot cities, such as Chengdu and Chongqing, have hosted numerous delegations from other local governments across the country, to learn about their “advanced experience.” At the same time, controversies and confusion about the land quota markets have emerged. It is unclear whether the quota markets provide a new mechanism to share the benefits of urban development with peasants, or are just another way of grabbing land that further weakens the property rights of peasants. Some criticize that the quota market is against the will of peasants, a “taking in disguise.” Others worry about its implications for the real estate industry. Since developers now have to buy quotas before they buy actual land parcels, quota trading has added new complexity and uncertainty to land transactions, potentially increasing already exorbitant real estate prices. Inside the pilot cities, officials’ opinions vary too. Some express confusion about the concept of quotas: what kind of right does a quota represent and who holds this right? Who should be compensated and how much should they be compensated? With these questions, at county and township levels, governments hesitate to promote this new policy designed by the municipal government. The Central Government, which initially allowed and endorsed the practice, has been watching local experiments carefully, and has been back and forth in its opinion. Nobody has a clear answer as to whether the quota market is innovative and efficient, or deceptive and distorting.

The new phenomenon of the land quota market and the controversies around it motivates this research. Using a government official’s own words, the quota market is about making land fly from the countryside to the cities. How can something as immobile as land fly? What happens when land is flying? Studying the formation and the impact of China’s land

quota market offers a rare opportunity to study a dramatic institutional change in progress. I ask two overarching research questions:

1. How was the institution of China's new land use conversion quota market formed?
  - a) How were the various levels of government and different bureaus involved? How did they coordinate, given that some would face uncertain changes in bureaucratic and fiscal control?
  - b) What were the strategies used to encourage the participation of land developers and peasants in this institutional change? How were these changes institutionalized and communicated to the broader public?
2. What are the impacts of the introduction of a land quota market?
  - a) How do land transfers through the land quota markets affect the urbanization pattern in China?
  - b) How does it affect the welfare of peasants?
  - c) How does it alter the allocation of land resources among local governments?

The literature review below explains the significance of the new phenomenon and how it requires us to expand current our understanding of urban economics, property rights, and Chinese intergovernmental relations.

## II. Literature Review

### 1. *Land and Public Finance: Extending the Framework of Fiscal Socialism*

Quota markets take place in the broader context of decentralization and urbanization in China. What my research about quota markets contributes to the literature is to show thoroughly that local land development and institutional changes are driven by public finance at its core and that the scale of our analysis needs to be regional rather than at the scale of the city. The model of Fiscal Socialism (Kim 2008) had already turned our attention to the link between land development and local public finance in transition countries. Fiscal Socialism posits that under political and fiscal decentralization, local governments provide land development rights to the market and in exchange they ask private developers to fund infrastructure and public services. This helps local governments meet citizens' demand for public goods provision, which local governments are responsible for, but often lack the fiscal capacity to do so. The model of Fiscal Socialism emphasizes the coordination of interests in both government and society.

I term my theoretical framework "Fiscal Socialism 2.0." The new type of land transfers from land quota markets have connected actors that were previously not included in the earlier generation of the land game. In addition, while before we treated local governments more or less as a whole, now we need to dissect the local government, and examine its internal conflicts and cooperation. With the emergence of the quota market, different levels of jurisdiction are involved in land-trading relationships. The theory of Fiscal Socialism needs to be further developed in order to unpack the complicated phenomenon. I argue that we should focus on the *system* of cities, rather than a single city as the unit of analysis. In

my study, big cities are not just economically more advanced than small cities, but also politically more powerful, due to the “municipality over county” structure. In China, a municipality is not a city. It is closer to the equivalent of a metropolitan area in the US, consisting of an urban core surrounded by suburban and rural counties. The major difference is, in the US, the metropolitan area will be under the jurisdiction of several governments and they have to work together on matters on a metropolitan scale. However, in China the municipal government governs all the urban districts, suburban counties, and the rural counties within its administrative boundary. The municipal government has the final say in most issues at the metropolitan scale. In this context, the politics around land development now are more about intergovernmental relations, as reflected in contestations around changing the size of land conversion quotas and the distribution of quotas among competing counties and districts. Figure 2 shows the key relations to be examined in my framework.

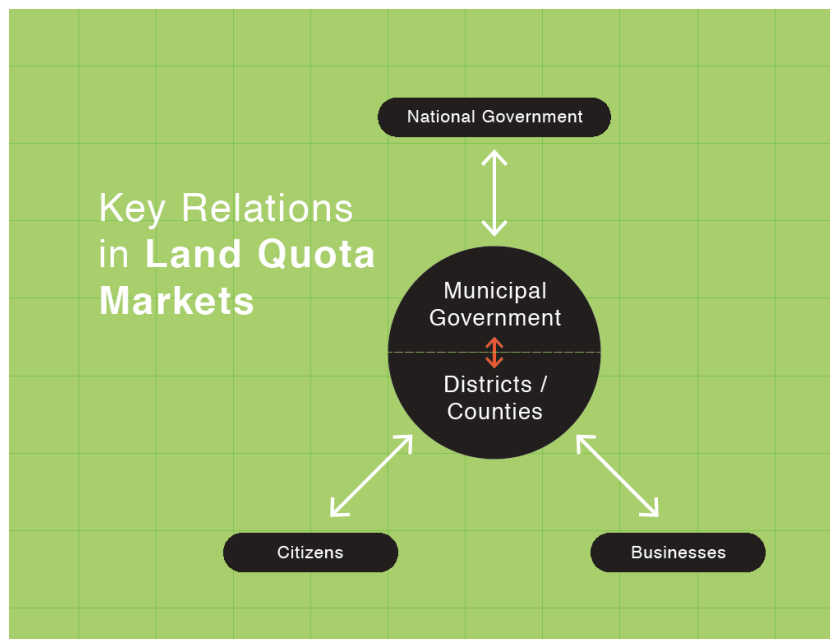


Figure 2 Key Relationships in Fiscal Socialism 2.0 (Land Quota Markets)

## 2. *Revisiting Urban Spatial Economics*

The most surprising contribution my research makes to the literature is that the core assumptions about urban spatial theories need to be revisited. Much of the public finance dynamics around government land sales are driven by the fact that a land parcel's location drives most of the market value of land and that local governments have more control over leveraging that value because it is proximate to the land. However, with a few but significant institutional changes, land quota markets may have rewritten this calculus.

Proximity to city center has been considered the core factor influencing land values and land use decisions in the classical monocentric model of urban spatial structure—developed as early as in the 19th century (von Thünen [1826] 1966), and formalized by urban economists in the 1960s (Alonso 1964; Muth 1969; Mills 1972). Lately, more nuanced explanations of city growth and spatial structure have incorporated factors such as human capital and employment opportunities (Glaeser and Saiz 2003; Glaeser and Gottlieb 2009; Glaeser 2011). But these factors still work under the assumption that proximity to the economic activities is what matters most to people's decisions regarding location. Even in a metropolitan area or a polycentric city where economic activities group into more than one center, the fundamental relationship between proximity and land value has not changed (White 1976; Helsley and O'Sullivan 1991). What is more, the growth of the metropolitan area is supposed to lead to depopulation and de-investment of surrounding rural areas. Remoteness is supposed to be a disadvantage (Baldwin and Martin 2004b; Henderson, Shalizi, and Venables 2001).

What is unusual about the land quota market is that land in the hinterland suddenly becomes valuable to urban markets. As a result, the countryside is being spatially reconfigured and invested in. In fact, land density rather than its location is the key value for quota generation. The more distant a village is, the more likely it will be involved in the land quota market. Remoteness becomes a spatial advantage. As I will discuss later, the quota markets have demonstrated a new kind of spatial logic of what I call “de-spatialization” and “re-spatialization.”

The land quota market may also be rewriting the relationships between rural and urban areas. As we will see, the reconfiguration of the remote areas is to ultimately channel more investment into the urban periphery; investing in “building a new socialist countryside” is to enable the growth of the capitalist cities. When land is flying from rural jurisdictions to urban jurisdictions, the changes are not just about spatial structure, but also the calculus of land values, and at the same time, realignment of inter-government relationships.

### ***3. Land Policies and Property Rights Evolution***

Planners intervene in land markets and development projects. Primarily, they do this through land policies, plans, and regulations. How are innovations in land policies achieved? Essentially by tweaking property rights in land, by packaging and repacking different bundles of rights in property (Ingram and Hong 2008).

To readers familiar with western planning history, the quota market may sound similar to other land tools that work through reconfiguring property rights, such as the land readjustment technique, growth boundaries, and transferable development rights (TDRs). Indeed the idea that property rights can be detached from one piece of land and then used on another—is comparable between the quota markets and TDRs. Another similarity between the two is that they are in response to high real estate market demand conditions. Improving land use efficiency and reducing built-up footprints are the common goals of quota markets and TDRs.

Early theories of property rights identify that changing external conditions can drive property rights changes (North 1994; Alchian and Demsetz 1973), but they overlook the

process of change. Current property rights researchers term this kind of explanation the “simple model” of property rights evolution. Not only is it simple, but it could be also overly optimistic (Levmore 2002). It cannot, for example, explain why inefficient property rights exist (Libecap 1986; Libecap 1989). Nor does it assess whether the property rights reconfiguration is beneficial to the public or not. The recent development in theories of property rights evolution calls for a “complete model” which focuses on the process and the politics of institutional change (Merrill 2002). Some scholars take a step further towards studying the interactions between institutions and the social political environment around it (Pistor 2014).

In the light of theoretical debates about property rights evolution, the differences between quotas and TDRs seem much more critical than their similarities. The two have evolved out of different political economy systems. TDRs are usually introduced in advanced economies with established real estate markets and legal property rights institutions, and their impacts make minor adjustments to the already built up inner city. The implication of China’s property right institutional innovation is much more than a question about marginal efficiency gains. To those involved, it has immense but unclear redistribution effects with implications for shifts in political alliances and opposition.

It is amazing that such a fundamental change requiring the coordination of multiple levels of government and private parties could happen so quickly. While some view China as a strong state, monolithic in its power, China experts have also written about the lack of control between different levels of government, particularly those farther away from Beijing (Lieberthal 2003; Mertha 2009; Su, Tao, and Wang 2013). And much of the research on intergovernmental politics revolves around control over key resources. Therefore, my research extends the literature on property rights evolution by studying the political process of making a significant change in property rights institutions. This paper asks how the “land conversion quota” as a property rights institution emerged and developed in China’s economic transition and rapid urbanization. Studying the change process requires historical institutional analysis, rather than simple cost and benefit analysis.

### **III. Research Design and Data Collection**

To answer my research questions I have adopted case study as the primary approach in this dissertation. Case studies are well suited for analyzing organizations, institutional relationships and processes (Yin 2003).

Chongqing Municipality and Chengdu Municipality, two metropolises in western China are my two primary cases. They stood out as pioneers in the policy experiment of land quota markets. They both had a comprehensive set of policies designed around quota trading, a mature quota market, and a large volume of quotas traded and applied to actual projects. In fact, they were the only two cities approved by the Ministry of Land and Resources to run full-fledged quota markets.

My most important analysis is within-case comparison, or a process of tracing the institutional evolution. In order to see the impact of the land quota market on a city’s development, I compare my case cities’ conditions after the quota market was established

with their situations before it was established. I also conduct between-case comparisons. Although both Chengdu and Chongqing have quota markets, the institutional designs and the political processes vary along important dimensions.

My most important data were collected from semi-structured interviews. I have conducted 63 interviews with key informants in my case cities. My informants include government officials in related departments at various administrative levels, different types of local developers, and peasants who have participated in the quota generation programs. I have also interviewed media professionals and rural investors who were not involved in the quota market but were alert witnesses of the changes.

I have also visited the rural land exchange centers in both cities where land quotas are transacted openly, collecting a wealth of market data about quota transactions, including the land size of quotas sold, selling prices, and more. I have examined key policy documents, government reports on the quota market, and land development project documents from my key informants. In Chengdu, I also got access to an official database of 735 quota generation projects planned between 2006 and 2011, with detailed information such as location of projects, size of quotas generated, project funding source, number of peasants resettled, compensation standards, and size of new settlements and so on. These quantitative data allow me to draw more systematic and nuanced conclusions about the characteristics of the quota markets.

#### **IV. Institutional Background: Land Use Planning and Quota Control System in China**

The institutional backdrop for the new phenomenon of “land quota market” is China’s rigid land-use planning system. The central concern of the country in land-use planning<sup>2</sup> is to preserve agricultural land amid rapid urbanization. The country’s basic assessment is that China’s agricultural land must be preserved in order to feed a populous country. This is especially important given that quality arable land has been disappearing quickly while the built-up area has been expanding quickly.<sup>3</sup> In the official language, the fundamental guiding principles of China’s land-use planning are to “uphold the most strict arable land protection system and the most strict land preservation system.”<sup>4</sup> The dominant concern for agricultural preservation has implications for urban spatial growth. In the planning process, the country sets up a target for the size of arable land to be preserved. The projection of the size of new urban land development is based more on the target of arable land protection than on a projection of economic and population growth. Therefore people concerned about how much urban land there is to use have to look at the flipside of the issue—how much arable land must they preserve.

---

<sup>2</sup> Note that in China, land-use planning is different from urban planning. The land-use plan balances agricultural land protection and urban expansion, while the urban plan targets the built-up area prescribed by the land use plan.

<sup>3</sup> Article 1, Chapter 1, “National Land Use Master Plan Outline (2006-2020).”

<sup>4</sup> Article 4 Chapter 1, “Measures on Drawing Up and Auditing of Land Use Master Plans,” Order No. 43 Issued by the Ministry of Land and Resources of P. R. China on February 4, 2009.



In its land-use planning, China, on the one hand, recognizes that urban expansion will inevitably continue to consume arable land; therefore there is a control on how much and how fast this should happen. On the other hand, it insists that preserving a certain amount of arable land is critical to maintaining the country's food security. Since the projected urban expansion will consume more arable land than is safe for food security, the remedial measure is to create new arable land through land consolidation to make up for the loss. The National Land-Use Master Plan Outline specifies quotas of total size of arable land preservation, size of total construction land, newly created construction land and target of arable land. These quotas and targets are hard constraints and must be strictly enforced.

The most important aspect of China's land use planning is the numeric control. Long-term planning is realized through an annual allocation of quotas. Quotas are allocated administratively in a top-down fashion: The Central Government assigns quotas to all provincial governments. Then the provincial governments distribute their allocated quotas to municipal governments which further break down the quotas and give them to district and county governments below them. In addition, each locality is required to create arable land at the same time that urban expansion is consuming land. Such a system leads to several critical problems.

First, the allocated amount of quota barely meets the demand for land during urban expansion. The original targets set in the Land-Use Master Plan are questionable. The Land-Use Master Plan is supposed to forecast long-term development in the next 10 to 15 years. It is hard to accurately project for future land expansion, given China's rapid and transformative economic changes and their impact on the demand for land.

Second, distribution of the limited amount of quota is problematic. According to my key informants, the quotas are not assigned to localities according to actual demand. Those with faster economic growth and higher demand for land do not necessarily get more land conversion quotas.

Lastly, the remedial measure of creating new arable land while converting arable land for construction is further limiting local government's ability to use the limited and ill-allocated quotas. Local governments also question the efficiency of preserving agricultural land indiscriminately across the country. Some localities have fertile land, while others have only barren land; some boast relatively abundant land resources, and others extremely limited. The actual costs as well as opportunity costs of saving agricultural land thus vary distinctly by locality, depending on their geography and stage of economic development. This difference is not taken into consideration by the Central Government when assigning quotas.

An official from the Ministry of Land and Resources explained to me that so many factors would matter in allocating quotas and assigning agricultural land protection tasks that considering all of them would make planning extremely difficult, if not altogether impossible. Although with many problems, the current quota system imposed indiscriminately is at least

the most politically feasible one.<sup>5</sup> Each city I visited cries for a lack of quotas, but it is especially problematic for places growing very fast, and with limited potential to create new arable land. The quota market is a local innovation that they have created in response to the limited quotas allocated by the Central Government.

## V. Tracing Institutional and Spatial Changes

### 1. *Design and Operations of the Quota Markets*

Against this institutional background of strict land conversion quota control, local governments in China invented the land quota market. It increases supply of developable land on the one hand, and meets the Central Government's requirement of farmland protection on the other hand. The trick lies in "swapping" built-up areas in the countryside with agricultural land in premium locations. The land swapping in a municipality involves different jurisdictions—land is outgoing from rural counties to suburban counties and urban districts.

The quota market is trading "conversion right," the right to change land use from agricultural to urban purposes. Before the establishment of quota markets, the conversion right was not defined and separated from the general development right. This new way of reconceptualizing and utilizing land has important implications for both rural and urban areas. It has changed the rules of the land game and the mode of land commodification. There are three key components of the quota markets: quota generation, quota use, and quota trading. The three components also conceptually correspond to severing the conversion right, exerting the right, and transferring the right. By examining the huge changes that quota markets have brought to rural and urban areas, I seek to illustrate the novelty of the new institution and how the key actors in urban and rural realms react to it.

In the rural areas, land quota markets have created a new process of quota generation and a new profession of "quota developers". Quotas are generated by demolishing low-density farmhouses and resettling peasants to high-density apartment buildings. Then the rural residential land previously occupied by the old farmhouses is cleared, leveled, and then reclaimed for farming, with irrigation infrastructure put in. The key actor that organizes the process of demolition, resettlement and reclamation is quota developers. Unlike real estate developers, quota developers profit by demolishing construction and reversing development. Quota developers can be both private and public entities. In Chengdu, the municipal government is trying to attract as many private quota developers as possible, because quota generation is both time consuming and capital intense. In Chongqing, however, the government is not allowing the private sector to enter quota generation. All quota generation projects are arranged by the municipal government, and township governments and village committees in Chongqing play the role of quota developers.

Quota generation has changed the rural landscape. Unlike land taking on the urban fringe, villages in quota generation projects are not targeted for their proximity to the city, but rather the density change after consolidating peasant residencies. Rural areas that were

---

<sup>5</sup> Interview 20110809-BJ-33.

previously not affected by urbanization are now involved by contributing land resources. More importantly, since compensations to peasants are the biggest component of the quota generation costs, quota developers tend to go farther out in more remote areas where people's expectation for compensation is lower. This has led to a peculiar phenomenon: densification of rural residences takes place first in the most remote areas.

In the urban sphere, quota markets create an extra step in land development. Now real estate developers have to buy land quotas before they can buy land parcels. Developers have to learn about this new institution and assess the impact on their businesses. Quota markets have raised the threshold for developers in some cases, and in others led to speculation in the land markets. In Chengdu all real estate developers are required to buy quota, and in that case, quotas work more like a tax or fee rather than representing any property right. In Chongqing, the municipal government gives developers with quotas special privileges such as picking their own land parcels outside the government plan, at the cost of bending current government procedures of land provision and land auctions. Both governments are specifically targeting residential and commercial development projects, not industrial projects.

A surprising finding from examining the sale and use of quotas is that despite all the focus on developers, most quotas are bought by county governments. Before the establishment of the quota market, suburban counties were most short of quotas. Although they are growing fast and need new land for development, they are politically much less important than urban districts. When municipal government allocates its limited quotas, it tends to meet the demand from urban districts first, while starves the suburban counties. Now with the establishment of the quota markets, suburban counties are able to close the gap to a certain extent through market transactions. County governments use the quotas bought for industrial projects in their jurisdiction. This reflects and reinforces the differential treatments of development projects by the governments in China: local governments treat residential and commercial projects as cash cows, but compete with each other to attract industrial projects. Before the establishment of the quota markets, developers of residential and commercial projects had to buy land at the market rate, while industrial projects were given land at very low prices or even for free. Now residential and commercial projects are required to pay for quotas on top of paying for land, while industrial projects do not need to worry about quotas and governments actively seek and buy quotas for them.

The heart of the quota market is the trading rules. The extent of transferability of land quotas is the flashpoint between municipal government and county governments. Counties prefer linking programs, a policy predecessor of the quota market, which helps keep quotas generated in one county stay in that county. The quota market, however, devised by the municipal government, turn quotas into an outgoing resource concentrated in the hands of the municipality. Furthermore, by examining the specific rules and the operational details of the quota markets in Chengdu and Chongqing, I found that the so-called "quota markets" really are not markets. They are heavily manipulated by the municipal governments, so the control of land is further taken away from the county government.

## *2. Spatial Changes Resulting from the Quota Markets*

The quota market has created a peculiar phenomenon, “flying land.” Although land itself cannot literally fly, landowners in different locations swap the uses of their land, so the developable land is concentrating on the urban fringe, and the arable land is expanding in deep rural areas. Rural areas participating in the quota market are going through dramatic changes in landscape. Village settlements are becoming smaller and denser, and the most remote villages are affected first.

This change is the result of a new spatial logic: spatial factors such as proximity and continuity, usually considered important in land development, no longer matter so much in the quota market. Other factors such as density and distance have become more important and work in unexpected way. I call this phenomenon “**de-spatialization**” and “**re-spatialization**.”

The land quota market has a “de-spatializing” effect. The value of quotas generated has nothing to do with their locations; rather the value is from the use change of the land. As long as a piece of developed land is reverted back to agricultural use, no matter where the land is, the quota generated is sold at the same price to quota buyers. If we conceive a quota as a new kind of input into the real estate industry, we can think of the quota just like cement or steel—no matter where it is produced, its value to real estate development is the same.

However, just like producing cement and steel, where a quota is more likely to be produced is where the production costs are the lowest. And here, because the commodity is land, the nature of land as immobile and location-specific still plays a role. Producing quotas in a particular location is more desirable depending on two factors, density change and distance. On the one hand, if settlements in a village are more sparsely located than in other villages before the quota generation, the density change in the village will be greater after quota generation; therefore the village will be more likely to be targeted for quota generation. On the other hand, if a village is far away from the city, peasants’ expectations for compensation will be lower than in a village near the city. Therefore the costs for quota generation are lower. Villages in the deep rural areas are more likely to be targeted for quota generation. This is “re-spatialization”; density and distance play important roles in unconventional ways.

We can use Chengdu’s case to empirically illustrate the de-spatialization and re-spatialization processes. According to the database of 735 projects planned in Chengdu between 2006–2011, if all implemented by tearing down farmhouses that originally occupied land in the size of 361,888.83 mu, at least 266,689.15 mu will be generated. A total of 430,191 households or 1,389,522 peasants will be affected. That is saying that the residential area in rural Chengdu has decreased by 266,689.15 mu. This is about a 74% shrinkage in total area of residential land in participating villages. Using floor area ratio, or the dwelling units per given size of area as a measurement, peasants’ new settlements are about 3.3 times denser than before. Moreover, these affected villages are located in what Chengdu categorizes as the “second development zone” and “third development zone.” The two zones correspond more or less with suburban counties and rural counties respectively. (See the table and the map below.) About 63.5% of all quotas to be generated are from jurisdictions in the third development zone or counties that are predominantly rural. The quota market has led to densification deep in the countryside.

Table 1 Distribution of Quota Generation Projects across County-Level Jurisdictions in Chengdu (2006 - 2011)

Locations (development zone)	Jurisdictions	No. of Quota Generation Projects	Size of Land Occupied by Old Farmhouses	Size of Land Saved (Size of Quota Generated)	No. of Households Resettled	No. of People Resettled
<b>1st development zone</b>	6 urban districts	16	11,437.61	8,222.85	17,493	57,545
<b>2nd development zone</b>	6 suburban districts/ counties	244	120,991.98	89,044.68	172,611	533,852
<b>3rd development zone</b>	8 rural counties	475	229,459.24	169,421.62	240,087	79,8125
<b>Total</b>	20	735	361,888.83	266,689.15	430,191	1,389,522

(Data source: Chengdu Rural Equity Exchange. Compiled by the Author)

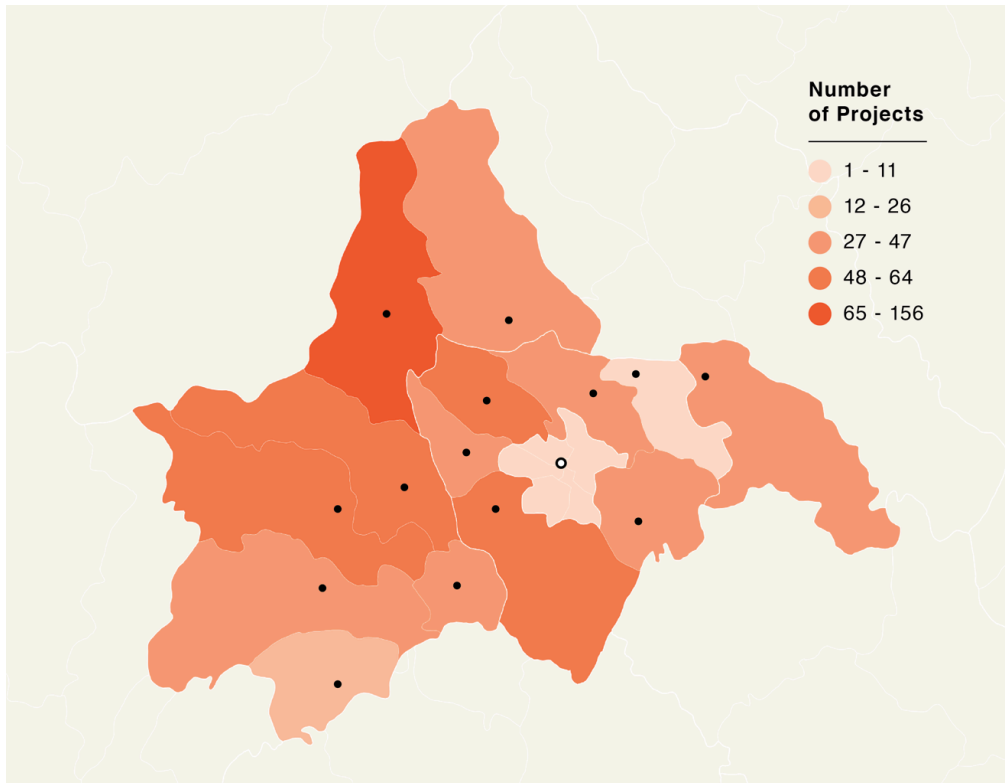


Figure 3 Number of Quota Generation Projects By County in Chengdu

On the urban land use, the impact of quota market is hard to assess. First, data about on what land parcels new quotas have been used are inaccessible. My key informants inside the government do not even have a clue. Second, there is a time lag for the impact to be shown—quota generation projects take at least two years to complete, and quota buyers have another two years to decide where to use the quota. This means that although the rural

residential area has been reduced to generate quotas, the urban area may not have consumed the quotas until four years later. Given the short observation period of my research (2008-2012), it is still early to quantify the impact of the new quotas on urban expansion.

However, we can make a guess about the long-term addition to urban land supply as a consequence of the quota market. My key informant from Chengdu Land Bureau has estimated that if half of Chengdu's rural households agree to participate in quota generation, and the new rural settlements are about 3.3 times denser as it is practiced now, then at least 0.49 million mu of quota could be generated in the next 5 to 6 years. It is important to note that urban land supply increased using new quotas is *on top of* the official quota. At its current scale, the new quotas could at least increase the urban expansion by 10% more than without the quota market and solely with official quotas.

Land use changes are the spatial expression of social relations. The dramatic spatial changes resulting from the quota market are only one part of the story of China's changing mode of land commodification; the other and more important part is about social relations that engender these spatial changes. The next section shifts perspective and examines the property rights reconfiguration in the establishment of the quota market.

## V. Explaining Institutional Changes: Reconceptualizing Property Rights and Realigning Key Interests

In the case of the quota market, we have observed a reconceptualization of land rights. On the surface, transferring of rights through the quota market is a response to the increasing scarcity of urban land. But this alone is not enough to explain why the institutional details of the quota market are so designed. We have to delve deeper into the negotiations among key actors in the society. In addition, the simple understanding of property rights evolution as an issue of overall efficiency prevents us from identifying the real winners and losers. As Levmore (Levmore 2002) has argued, when interpreting property rights changes, behind the optimistic efficiency improvement story, there is always a pessimistic interest group story.

I examine the detailed politics around the quota market using the framework of Fiscal Socialism 2.0. (See Figure 2 on Page 4 for an illustration of the key relations.) I first discuss central-local relations, which is a precondition for the establishment of the quota market. I then turn to the conflict between different levels of local governments, which is the most distinct feature of Fiscal Socialism 2.0 from 1.0. I then discuss how the key relationships in Fiscal Socialism 1.0, that is, relationships between government and businesses and between government and peasants, still matter in Fiscal Socialism 2.0, but have developed new dynamics. The key question boils down to this: How do de-spatialized transfers of land alter land-centered politics and the associated costs and benefits of different actors? What is the bargaining power of each actor and how do they bargain?

## 1. *Struggles between Local Governments and the Central Government*

The battlefield between central and local governments is whether the Central Government allows local governments to experiment with land conversion quotas outside the current legal and regulatory frameworks, and if so, how much freedom local governments could have in the experiment. In this regard, the interests of the municipal government and the suburban county governments are aligned—they both need more quotas for urban growth, and want the control of land to be further decentralized. Although the municipal government and the county government would quarrel about the detailed terms of quota transfers, they agree that getting the experiment started is the first order issue. They cooperate in striving for special policies from the Central Government.

So does the Central Government know the intentions of local governments? Why would it allow or not allow local governments to experiment with quotas? My key informant from the Ministry of Land and Resources said: “We know that the so-called ‘land reforms’ and ‘rural housing upgrading programs’ are all about quotas. Quotas matter so much to local governments—they do not just affect land uses, but local public finance, economic growth, and achievements and thus promotions of local leaders. Giving local governments some freedom is our choice out of no choice.”<sup>6</sup>

My key informant also admitted that the Central Government is well aware of the problems with the system of official quota control, the most fundamental one being the conflict between rationing limited quotas when the demand for land is huge. “The command and control approach as represented in quotas is not the best solution. If possible, we would like to adopt zoning by law like in the US, to regulate land use spatially, rather than numerically. Ideally, the regulations of space should be strictly enforced, while the projections of land use should be flexible and adjusted accordingly to reflect real demand. But in China’s reality, it is just the opposite. The long-term planning is binding, while the short-term spatial regulations are subject to changes made by local authorities.”<sup>7</sup> Although China’s economic reform has been ongoing for more than three decades, in the field of land use, the transition from central planning to market is still hard to achieve.

Designing institutional details seems to be the biggest challenge. “Even if we recognize the general direction, we don’t know the solutions to all the challenges. Land management is such an intricate issue. There will be so many uncertainties with reforming land rights. You change one detail and it might have a domino effect on many other things.”<sup>8</sup>

By allowing local governments to experiment, the Central Government is delegating the difficult task of institutional design to local governments. The Central Government is learning what works and what doesn’t through local experiments. If such experiments turn out to be successful, the Central Government can use them as a model and scale it up to the whole country. If experiments fail, the adverse affects are contained locally and do not undermine the credibility of the Central Government. This approach of “local

---

<sup>6</sup> Interview 20110809-BJ-M.

<sup>7</sup> Interview 20110809-BJ-M.

<sup>8</sup> Interview 20110809-BJ-M.

experimentalism authorized by the Central Government” is seen in many aspects of China’s economic reform (Heilmann and Perry 2011). This time, it is applied to rural-to-urban land conversion, which only became a key issue in the era of urbanization.

Local governments are also in a better position than the Central Government to deal with land issues; since land is immobile and essentially local, reconfiguring land rights involves the interests of a range of local actors, and requires local knowledge. Local governments, rather than the Central Government, are the institutional entrepreneur and are at the center of the stage of the show.

Getting the green light from the Central Government is the precondition of the quota experiment. But in the course of the experiment, the Central Government continues to influence institutional evolution at key moments. This is because there are certain bottom lines on which the Central Government insists. Issues that would make the Central Government nervous are often related to risks and uncertainties that might affect social stability. The Central Government worries about peasants’ discontent about compensation and resettlement; it also worries about homebuyers’ reactions to increased housing prices due to quota costs. The Central Government watches carefully and steps in when local governments have crossed the line. Local governments don’t like that the Central Government looks over their shoulder. “Their [The Central Government’s] concerns are about operational details—these we can sort out ourselves and do not need their micromanagement.”<sup>9</sup>

The Central Government’s intervention during the development of the quota experiment is more than just micromanaging; it could turn the whole thing around and reverse the direction of institutional change. There are different sects inside the Central Government. The “reformers” are more market-oriented and favor the quota experiment for its prospect of improving efficiency in land use. The “conservatives” detest the quota experiment for its potential impact on social equity—they worry that resettled peasants and rural counties where quotas are outgoing will be disadvantaged. Allowing the quota experiment to go ahead is a compromise between the two sects. The different sects constantly battle and they use the divergent results of local experiments to justify their positions. In Chengdu’s first open bidding for quotas, the clearing price was unexpectedly high and Chengdu’s quota experiment was immediately stopped by the Central Government. Later Chengdu could continue this experiment only under the condition of significantly revising its trading rules to limit quota prices. The local practitioners in Chengdu think that the Central Government was making too big a deal. They think the conservatives are taking advantage of small operational issues to turn around the entire experiment. Which sect in the Central Government has the upper hand is beyond the control of local governments, but it nevertheless affects the direction of institutional evolution at the local level. This situation encourages local governments to be speculative and opportunistic, constantly guessing the preferences of the Central Government. In the local officials’ own words, “We keep watching from which direction the wind is blowing.”<sup>10</sup> This explains why Chengdu’s political leaders pushed for quotas in such a rush, without careful market and economic analyses—they must take advantage of the tail wind before it changes direction.

---

<sup>9</sup> Interview 20110517-CD-Y.

<sup>10</sup> Interview 20110518-CD-YH.



In sum, the quota experiment is an initiative by local governments to change central regulations and practices, but authorized by the Central Government. The Central Government lets local governments do the trial and error for difficult policy issues that the Central Government cannot solve. However, the Central Government is not all hands-off. Opinions of different sects inside the Central Government, as well as the fundamental concerns for social stability, will drive local experiment in different directions and affect details of the institutional design.

## *2. Conflicts inside Local Governments: Municipal and County Governments*

Since municipal government and county governments both govern certain urban areas under them, there is competition for land conversion quotas. This is a competition between the big and more powerful city governed by the municipal government, and the small and less powerful cities governed by the county governments. Therefore, where the new quota will be used is important. The municipal government wants to use it in urban districts so that any fiscal revenues or economic growth are attributed to the municipal government, and the counties want to keep new quotas with themselves.

The mechanism to determine where to use the new quotas is the big flashpoint between municipal and county governments. The municipal governments push for the quota market, while the county governments prefer “linking programs,” a policy program similar to quota market, with a key difference on the market area of quota transfer: “Linking programs” restrict the quota generation and quota use in the same county. Only counties that not only have vast rural areas to generate quotas but also fast-growing urban area to use quotas would fit into this “self-sufficient” category, and have incentives to run linking programs. Suburban counties are self-sufficient but rural counties and urban districts are not—rural counties have a very small urban area and therefore little demand for quotas, and urban districts have a small rural area and therefore limited potential to generate quotas. The quota market has changed this and makes quotas available in the entire municipality consisting of dozens of counties and districts.

How does this major change in institutional design from “linking programs” to quota market affect the allocation of land resources among counties and districts then? Without clear data on where the new quotas are finally used and thus unable to compare that with data on how the official quota are used, I develop the following analytical framework to help us gauge the possible results.

First, to remind us again, suburban counties have the largest gap between real demand for land and the amount of official quotas allocated, and therefore need new quotas more than others. This is a result of the political dominance of municipal government over counties in official quota allocation. Would the quota market help suburban counties close this gap? Compared to official quota allocation (as illustrated in Figure 4), a linking program is a way for self-sufficient suburban counties to generate quotas and reduce the gap, because the quotas generate flow from one part of a county to another of the same county (as illustrated in Figure 5). In that sense, linking programs could ameliorate the imbalance between the large amount of quota concentrated in the center city and the small amount in the counties.

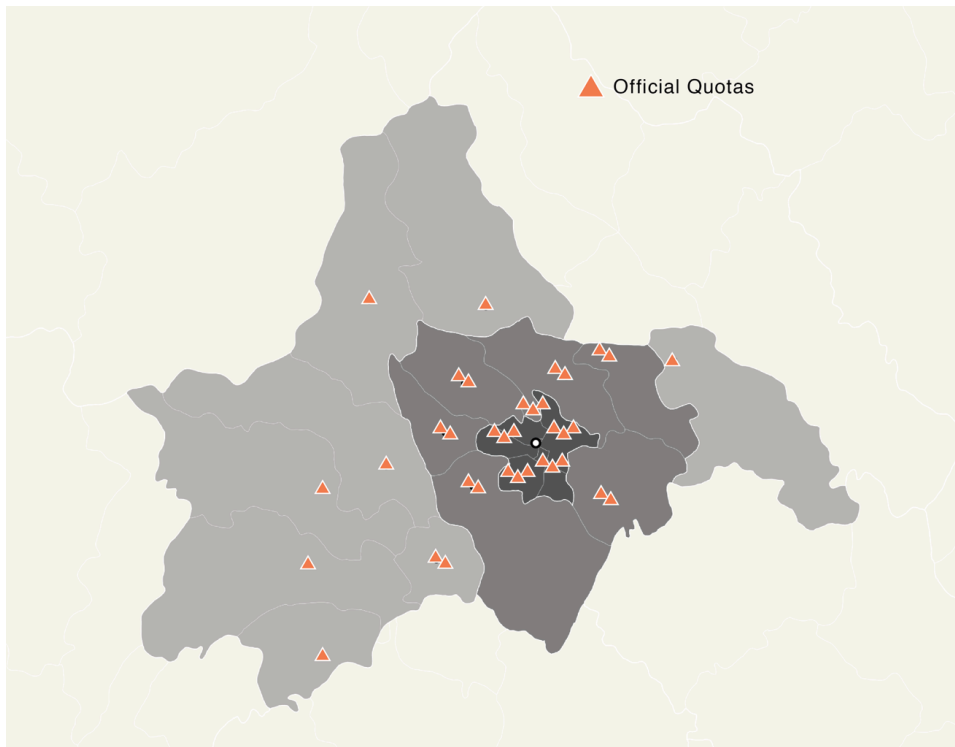


Figure 4 Distribution of Official Quotas

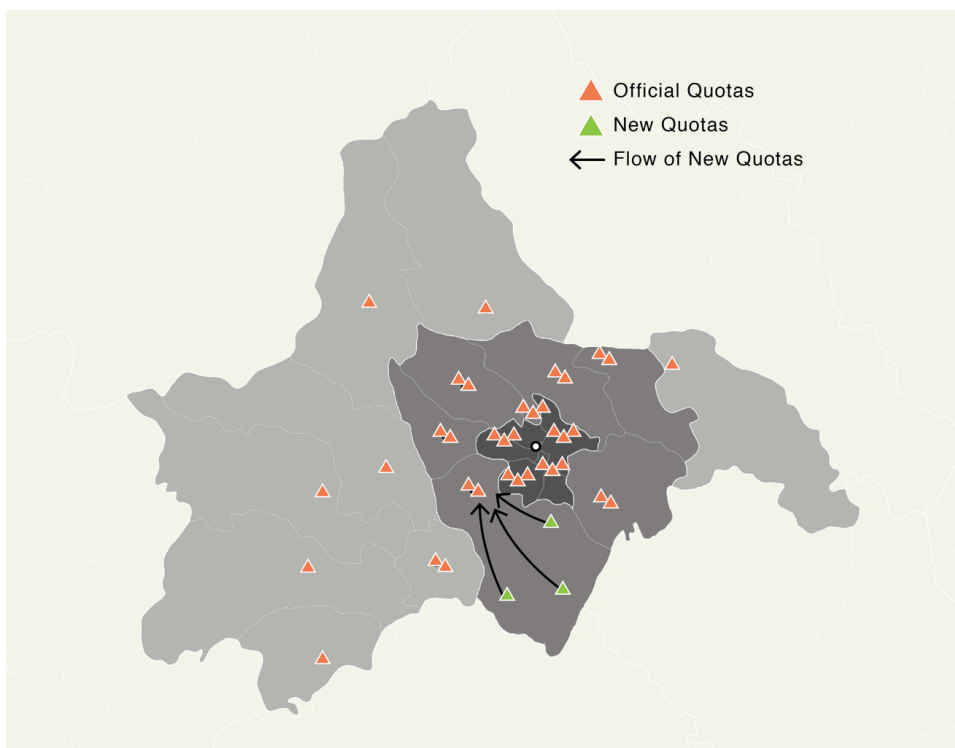


Figure 5 Flows of New Quotas in Linking Programs

But, compared to linking programs, what are the added benefits of upgrading to a quota market? I argue that the added benefits to suburban counties are marginal and limited to the following: for suburban counties that cannot produce enough quotas to meet their demand in linking programs alone, they now have a choice to buy quotas from outside the county. For counties that have a surplus in locally created quotas—that is, if they have produced more than they can consume, the quota market provides a platform to sell the extra quotas. However, this is unlikely to happen. Suburban counties would rather “bank” the quotas for projects in the future than sell them. This is because land prices in suburban counties are much higher than the quota price.

The added benefits of the quota market are mostly for the municipal government. First, rural counties were not included in linking programs, but are now participating in the quota market. They mostly play the role of quota generators. With much more vast rural areas than the suburban counties, rural counties can increase the potential pool of new quotas for the entire municipality. Second, the urban districts, not included in the linking programs, are now participating in the quota market as buyers. They can use quotas for projects in their jurisdictions, which contribute to the municipal government’s finance and economic growth. The flow of new quotas in the quota market is illustrated in Figure 6.

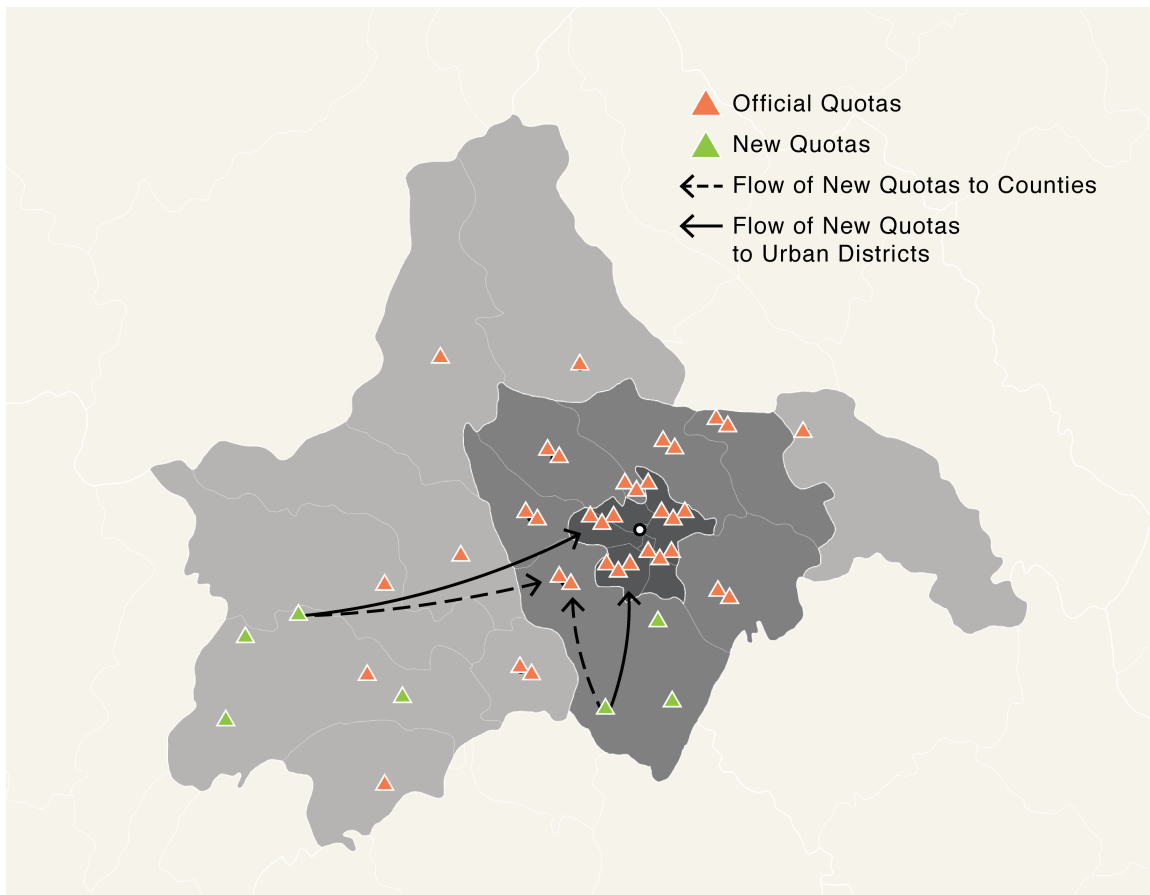


Figure 6 Flows of New Quotas in the Quota Market

With the above conclusions, we refine our question about the municipal and county government relationship: How does the increased pool of new quotas and the access of

urban districts to new quotas affect the distribution of land resources? Would it reduce the imbalance between the center city (urban districts) and suburban counties, or enlarge it? Would it at least make suburban counties better off than without any new quotas? My answer is, it depends. And it depends heavily on the intention of the municipal government.

First, would the quota market make relative improvement in suburban counties' position in land resources allocation? The flip side of this question is, although all will have more quotas, thanks to the creation of new quotas, would urban districts get even more than the counties, therefore making the imbalance even bigger? The quota market has "saved" the municipal government some official quotas. In fact, in both Chengdu and Chongqing, real estate developers in the urban districts are a main force buying and using new quotas, in addition to county governments. Before the quota market, real estate developers did not need to deal with quotas—because a quota in essence is a government permit that a local government needs to secure before selling land on the market. Now with the quota market, by imposing new quotas on developers, the municipal government has in fact saved some official quotas that they should have used on these projects.

How would the municipality use these saved official quotas? They could act in self-interest and use them to develop more projects in the center city, or act in the greater good of the municipality and distribute them to counties that lack quotas. In Chengdu for example, the final use of the saved quotas is still being considered. One proposal is to give the saved quotas back to counties. In Chongqing, there is no such thinking, and counties are complaining about the forced outgoing of quotas.

Second, would counties improve their absolute position? Stated differently, would they at least have more quotas (official quota and new quota combined) and therefore more land to develop, than without any quota experiment? My answer is that it also depends on the municipal government's intention and the allocation of the official quota. To remind us again, the municipal government has the authority to distribute quotas to the district and county governments. It often tends to meet the land demand from urban districts first and leave the county governments unsatisfied. In the extreme case, the municipal government could decide to give counties even fewer official quotas, and make them rely more on buying new quotas from the market. In that case, the counties may end up having fewer quotas than before any quota experiment.

In the evolution of quota markets, we have seen a decentralization and then recentralization process of land control. Figure 7 is an illustration of how different institutional designs correspond to the control of land by different levels of government. I argue that the quota market creates a possibility to rebalance the resource allocation between center city and the counties. But because the institutional design eventually gives the decision power to the municipal government, it depends on the intention of the municipality. This conclusion also suggests that the quota market is only a *marginal* revision to the official quota allocation system. Although the quota market provides counties the freedom to buy new quotas from the market, it also enables further concentration of quotas in the hands of municipal government. It is still political power, not market forces, which dominate the allocation of land resources.

### 3. Local Governments and Businesses: Reinforcing Differential Treatment

In the government-business relationships, the municipal and county governments have similar interests and are in general collaborating. The creation of the quota market has reinforced the pattern of the government's differential treatment of different kinds of land users. The first kind is the commercial and residential real estate developers, the second kind industrial developers, mostly factories.

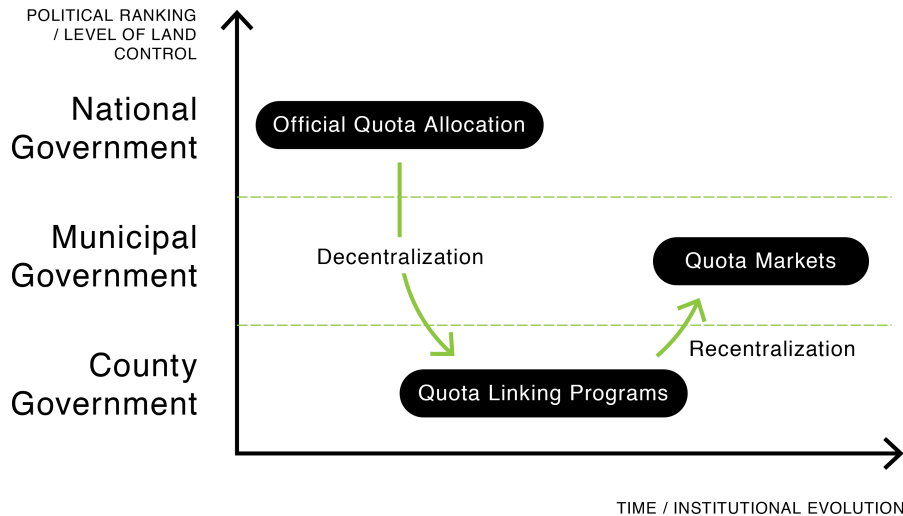


Figure 7 Decentralization and Recentralization of Land Control

The residential and commercial development consumes only 10% to 20% of newly converted land every year; in contrast, industrial land development consumes more than half. Before the establishment of the quota market, we have already observed that the governments sold land to residential and commercial land users at market rate through open bidding, while granting land to industrial land users at a very low price or even for free. Treating the two kinds of land developers differently has revealed the government's fiscal and economic development strategy: commercial and residential development is going strong in China and these developers have very inelastic demand for land, especially land in premium locations. Through land sales to them, the government can generate immediate fiscal revenues. Industrial developers are something Chinese local governments have to go after. Cities are competing with each other fiercely for industrial investment, aiming at taxes, job creation and economic growth down the road. Since factories do not value location so much and their labor costs and operational costs do not vary too much across cities, where they can get land most cheaply would affect their location choice. Leveraging land therefore becomes local governments' primary policy tool to attract industries.

The quota market has only reinforced this divergent treatment of residential and commercial land users versus industrial users. Using its regulatory power, the municipal government has imposed quotas to residential and commercial land users, making them pay for quotas, on top of paying for land. For the industrial users, the local governments are buying quotas for them, and using quotas (therefore availability of land) to attract industries.

#### *4. Local Governments and Peasants: Deepened Rural-Urban Divide*

The spatial dimension of the quota market is very different than typical land taking. Understanding the government-peasant relationships requires us to ask, peasants where? Two groups of peasants are affected by urbanization because of the quota market. The first group is peasants on the urban fringe where the quota is used. Peasants' land in this case is taken for its location advantage, being close to an urban economic center. This group of peasants already existed in typical land taking before the establishment of the quota market and is further impacted by the quota market. The second group of peasants affected by the quota market is in deep rural areas where the quota is generated. Peasants' land in this case is taken for its low density—resettling peasants into higher-density residences and reclaiming their old residential land for farming could generate land quotas. The second group of peasants affected by urbanization is the unique result of the quota market.

When local governments claim that quota markets are pro-peasants, they make two mistakes. First, they have overlooked the impact on the first group of peasants on the urban fringe. Second, the impact on the second group of peasants in the rural areas is complicated and far-reaching, and cannot simply be said to be all positive.

I argue that the quota market has in fact displaced more peasants on the urban fringe. The purpose of creating quotas is to convert more land on the urban fringe. The official quota controls the scale of conversion, but the new quota has increased this scale. The politics around land taking and the confrontations between peasants and government is well documented in earlier research under the framework of Fiscal Socialism (Yu 2007; Yu 2008; O'Brien and Li 2006; O'Brien and Li 2005). In the process of government land taking, peasants revolt when they see that their land could generate so much value once turned into urban use, but receive compensation only comparable to their agricultural income. This confrontation has not changed in the quota market and the scale is increased. Local governments have often underemphasized adverse impact on peasants on the urban fringe.

What about the impact on the second group of peasants? I argue that potential impacts include reduced confrontations between peasants and the government, important lifestyle changes that peasants find hard to adjust to, and uncertain economic prospect for them.

##### *a) Reduced Confrontations*

In quota generation projects in the deep rural areas, the political dynamics between peasants and the government are very different than from typical land taking on the urban fringe. Peasants in quota generation projects are generally more satisfied with the compensation they receive. Chongqing government repeatedly stresses that all sales proceeds of quotas go

to the peasants as evidence that the quota program is fair and pro-peasants. But this is not because these peasants get more compensation than peasants on the urban fringe whose land is taken. In fact, the compensation standards are comparable. The difference is that the expectations of peasants in quota generation are much lower. De-spatialization plays a role here—unlike peasants on the urban fringe who see their farmhouses and rice fields turned into high-rises in front of their eyes, peasants in the deep countryside are not aware that the quotas generated from their land will be used somewhere else to build high-end houses, shopping malls or factories. If they knew that their compensation was only about 1/20 to 1/10 of the final land-selling price, thanks to the quota they contributed, they might have a feeling of bitterness, like their counterparts on the urban fringe. Their dissatisfaction would increase confrontations with the government.

Holdout problems are also much less severe in quota generation than in typical land taking. In land taking on the urban fringe, the fiercest confrontation between peasants and the government would happen when a few households refuse to move. Location is important in this case—if the land cannot be cleared, the entire development project gets stalled. Government coercion often leads to bloody violence. Internal conflicts among peasants during typical land taking are also severe—the last few houses refusing to move will be pressured and even harassed by the rest of their village. Sometimes this is because the final compensation is disbursed only when the whole village is moved. Another reason is that the holdout households could bargain for much more compensation, making their fellow villagers furious about the difference.

In quota generation such conflicts are much less severe, because locations and continuities are less important—again a benefit of de-spatialization. Peasant participation in quota generation projects is voluntary. I have seen in my fieldwork farmhouses standing next to demolished houses, rather than an entire village being wiped out. If one household does not want to move, its impact on the entire project is marginal. A quota is only a number. One less household to move only means one less mu of quota to generate. Since the loss is small and the stakes much less, the government does not pressure every peasant into participating. In fact, government officials I interviewed say that a challenge of their work is that peasants sometimes change their mind in the middle of the project, so the project design has to change accordingly. It shows that peasants do have a choice. In this sense, peasant-government confrontation in quota generation is much more mild than in land taking. Among the peasants, peer pressure is also much less. Each household makes individual decisions. Moving early or later does not make a difference in the compensation they receive. The perceived fairness is bigger than in typical land taking. Therefore peasants will not push their fellow villagers to also participate.

### *b) Dramatic Lifestyle Changes*

For peasants in the rural areas who participate in the quota generation projects, there are both positive and negative welfare impacts. On the positive side, their housing conditions are indeed improved. From old, rundown farmhouses peasants strenuously built by themselves over the years, to ready-to-move-in new apartments with running water (and even elevators in some cases), paved roads in and around the residential community, schools and clinics nearby, they are enjoying much better living conditions.

“Housing upgrading” is the strongest evidence local governments emphasize as improving the life of peasants enabled by the quota market. Some local governments call this form of new concentrated residential community “on-site urbanization,” boasting that peasants do not need to migrate to cities for a better life. Rather, just by staying where they are, with upgraded housing, improved infrastructure and public services, peasants are enjoying modern, urban life.

However, to peasants, this is a lifestyle change that many find hard to adjust to. Peasants complain about very specific things: living in apartments, they have nowhere to raise pigs and chickens; climbing upstairs is difficult for the old and crippled, but when living in their old one-story farmhouses, it was no problem. Having running water is good but paying for it is not.<sup>11</sup> All these are examples of adjustment issues as a result of the sudden transition to an urban lifestyle. De-spatialization again plays a role in this transition. As discussed earlier, there is a tendency for quota developers to go farther out into the deep rural areas to save generation costs. This leads to a counterintuitive phenomenon: the more rural and farther away from urban areas a village is, the faster peasants’ lifestyle is transitioned to urban. Where it is most rural is becoming urban first, and the transition shock is the greatest.

### *c) Uncertain Economic Prospect*

Another problem of the so-called “on-site urbanization” is that peasants’ transition to modern lifestyle takes place *before* their transition to modern mode of production. Traditionally, peasants have sparsely settled for the very reason that they want to be close to their crop fields. Living in concentrated, high-density apartments at quite a distance from their fields means increased transportation costs (both in terms of travel time and monetary costs). How would that affect peasants’ farming practices?

Local governments realize that living away from the individual plots would be a problem for the peasants, and have different strategies to deal with it. One approach is to leave peasants’ farming practices enacted as much as possible, and make them commute to the fields. In Yazhuang Township of Jiaxing Municipality, the township official told me that peasants there mainly grow peach trees, which are of low maintenance and need little heavy machinery. Therefore after resettlement, “peasants can just ride their bicycles from the new houses to their peach gardens.”<sup>12</sup> In Tianjin, township governments have arranged shuttle buses to transport peasants every day to the crop fields. However, these can only work as temporary solutions.

The other approach by local governments is to fundamentally transform peasants’ farming practices—replacing family farming with corporate farming. In doing so, they combine the quota program with another initiative that the Central Government has been advocating for—pooling farmland together for large-scale modern farming. The Central Government

---

<sup>11</sup> As covered in many news articles in Chinese. In English, a recent thesis has documented the shocks to changed lifestyle in a village in Shandong Province. See Wilson, Saul. 2014. “Redesigning Rural Life: Relocation and In Situ Urbanization in a Shandong Village.” Undergraduate Thesis, Cambridge, MA: Massachusetts Institute of Technology.

<sup>12</sup> 20110308-JS-Un.



believes that large-scale modern farming can save the deteriorating agricultural sector in China. Currently, fragmented plots by individual households are too small to generate economy of scale, resulting in low productivity and limited income for the peasants. Local governments implementing this initiative argue that once peasants transfer their farmland for large-scale farming, the peasants not only can get land rent from the agricultural corporations, but also have the option to be hired by corporations as agricultural workers, and earn a salary on top of the land rent.

Promoting large-scale modern agriculture was designed as a policy initiative independent of the quota market. But I found that the two have interaction effects. In places where the local governments have already been pushing for large-scale agricultural modernization, peasants are more likely to participate in the quota market. They reason like this: since I would not farm my individual plot anyway after transferring my farmland, it does not hurt if I live at a distance from it. In places where the local governments initiate the quota program first, peasants' reasoning is similar: since I would live at a distance from my crop field, I might as well transfer it to agricultural businesses and save the transportation costs and time. The quota generation program targets the *residential land* of peasants and large-scaling modern agriculture program targets their *farmland*. Unexpectedly, the two independently designed policy programs often happen hand-in-hand in the same village, and transform peasants' lifestyle and mode of production at the same time.

However, the success of agricultural business and its impact on peasant welfare is yet to be seen. There are also cases where peasants have been relocated, but the village cannot find agricultural corporations interested in renting their land. In this case, the economic prospect of the peasants is uncertain. If they have to continue to farm individually, the problem of transportation costs comes back, and there is no sound solution yet. To be sure, places like Chengdu have measures aimed at preventing this from happening. The municipal government requires that townships consider potential economic development opportunities for peasants when designing quota programs.<sup>13</sup> But this is only a safeguard measure and its implementation is not guaranteed. More importantly, it does not alter the incentives of township and county governments, whose main purpose is quota generation.

To conclude, because of the creation of the quota market, the scale of land taking on the urban fringe is likely to increase now that more quotas are available to the government. This means displacing more peasants on the urban fringe than without the quota market. For peasants in the deep rural areas who participate in quota generation, having better housing is not all positive. Living in higher density settlements entails lifestyle change as well as impact on farming practices for peasants. The drive behind the drastic changes in the rural landscape, rural economy, and rural lifestyle is the government's quest to get more quotas for urban expansion, rather than merely benefiting the peasants.

Since the research period of this project is relatively short (between 2008-2012), the longer-term impact on peasants is still to be seen. Although peasants mostly seem to be playing a

---

<sup>13</sup> See for example, Chengdu Planning Bureau, and Chengdu Land and Resources Bureau. 2011. "Chengdushi Xiang (Zhen) Zonghe Guihua Bianzhi Jishu Daoze [Technical Guidelines for Drawing up Comprehensive Plans of Towns and Townships in Chengdu]."

passive role in the process of institutional change, if their adjustment to changes in lifestyle and production mode down the road proves to be difficult, they may become the main force overturning the quota market.

## VI. Conclusion

The quota market has led to dramatic landscape changes in rural and urban China. Behind the spatial changes is a process of property rights reconfiguration, which is essentially shaped by social relations and power dynamics. The property right represented by a quota is a “conversion right.” In the Chinese context, conversion right is about intergovernmental relationships—the national government as a rule maker and regulator grants local governments, the landowners a right to change agricultural use of land to urban use. With rapid urbanization, the conversion of land matters a great deal to local public finance, local economic growth, and even promotion of political leaders.

In the formation of the quota market, local governments act actively as the institutional entrepreneur. With the Central Government, they vied for the policy space to experiment with quotas. With businesses, they take advantage of existing differential treatment of different kinds of land developers and impose quotas on those who are able to pay. To peasants, they provide improved housing conditions, in exchange for peasants’ participation in quota generation.

However, the institutional entrepreneurs cannot single-handedly change the system. There are pushes and pulls in their relationships with other key actors. The Central Government steps in when the quota experiment touches basic concerns of the Central Government about social stability. Businesses, although they seem to be generally weak and passive in their relationship to government, exert their influence through market power. They vote with “prices” to signal the contradictions in design of the quota market. Lastly, although peasants in quota generation projects seem to be satisfied with their compensation level, the lifestyle change and the impact on traditional farming is potentially adverse. The peasants’ disorientation in this drastic, engineered transition to modern life in the long run could tip over the entire system.

Another factor influencing the institutional evolution is the conflicts inside the local governments. Municipal government and county governments are not just higher and lower level political units, but also represent big and small cities. They compete for land quotas and their relative positions decide where the quotas are going and where urban expansion is taking place. Eventually the powerful municipal government gets to decide how the quotas are used.

A seasoned rural investor I interviewed in Chongqing said the quota market is the product of “city hegemony,” further drawing land resources from the rural areas. I would like to add that it is also “big city hegemony,” reinforcing the political dominance of municipal government over county governments. Under the quota system, we will expect that the big

center cities continue to grow bigger, while small urban areas governed by the county struggle to expand.

Land “flies” from rural to urban areas in China through the land quota markets. Since the commodity traded on this market is a special kind of land right, such trading has directly reconfigured space. Space-specific social relations centered on the local governments are altered because the land quota markets work to connect and disconnect spaces in unexpected ways. The result is that land resources fly out of the hands of the weak, and further concentrate in the hands of the powerful. The expanded market has only reinforced this power imbalance.

## References

- Alchian, Armen A., and Harold Demsetz. 1973. “The Property Right Paradigm.” *The Journal of Economic History* 33 (1): 16–27.
- Alonso, William. 1964. *Location and Land Use; Toward a General Theory of Land Rent*. Cambridge, MA: Harvard University Press.
- Baldwin, Richard E., and Phillippe Martin. 2004. “Agglomeration and Regional Growth.” In *Handbook of Regional and Urban Economics, Volume 4: Cities and Geography*, edited by V. Henderson and J.F. Thisse, 1st ed. North Holland.
- Douglass C. North. 1994. *Institutional Change: A Framework Of Analysis*. EconWPA. <http://ideas.repec.org/p/wpa/wuwpeh/9412001.html>.
- Glaeser, Edward L. 2011. *Triumph of the City: How Our Greatest Invention Makes Us Richer, Smarter, Greener, Healthier, and Happier*. 1ST edition. New York: Penguin Press HC,
- Glaeser, Edward L., and Joshua D. Gottlieb. 2009. *The Wealth of Cities: Agglomeration Economies and Spatial Equilibrium in the United States*. National Bureau of Economic Research, Inc. <http://ideas.repec.org/p/nbr/nberwo/14806.html>.
- Glaeser, Edward L., and Albert Saiz. 2003. *The Rise of the Skilled City*. No. 10191. NBER Working Paper. The National Bureau of Economic Research.
- Heilmann, Sebastian, and Elizabeth J Perry. 2011. “Chapter 1 Embracing Uncertainty: Gurrilla Policy Style and Adaptive Governance in China.” In *Mao’s Invisible Hand: The Political Foundations of Adaptive Governance in China*, edited by Sebastian Heilmann and Elizabeth J Perry. Harvard Contemporary China Series 17. Cambridge, MA: Harvard University Asia Center : Distributed by Harvard University Press.
- Helsley, Robert W., and Arthur O’Sullivan. 1991. “Urban Subcenter Formation.” *Regional Science and Urban Economics* 21 (2): 255–75. doi:10.1016/0166-0462(91)90036-M.
- Henderson, J. Vernon, Zmarak Shalizi, and Anthony J. Venables. 2001. “Geography and Development.” *Journal of Economic Geography* 1 (1): 81–105. doi:10.1093/jeg/1.1.81.
- Ingram, Gregory K., and Yu-hung Hong. 2008. “Examining Land Policies from a Property Rights Perspective.” In *Property Rights and Land Policies*, edited by Gregory K. Ingram and Yu-Hung Hong, 3–22. Cambridge, MA: Lincoln Institute of Land Policy.
- Kim, Annette M. 2008. *Learning to Be Capitalists: Entrepreneurs in Vietnam’s Transition Economy*. New York: Oxford University Press.
- Levmore, Saul. 2002. “Two Stories about the Evolution of Property Rights.” *The Journal of Legal Studies* 31 (2): S421–51.
- Libecap, Gary D. 1986. “Property Rights in Economic History: Implications for Research.” *Explorations in Economic History* 23 (3): 227–52. doi:10.1016/0014-4983(86)90004-5.

- Libecap, Gary D. 1989. *Contracting for Property Rights*. Cambridge, England: Cambridge University Press.
- Lieberthal, Kenneth. 2003. *Governing China: From Revolution to Reform*. Second edition. New York: W. W. Norton & Company.
- Merrill, Thomas W. 2002. "Introduction: The Demsetz Thesis and the Evolution of Property Rights." *The Journal of Legal Studies* 31 (s2): S331–38.
- Mertha, Andrew. 2009. "Fragmented Authoritarianism 2.0': Political Pluralization in the Chinese Policy Process." *The China Quarterly* 200: 995–1012.  
doi:10.1017/S0305741009990592.
- Mills, Edwin S. 1972. *Studies in the Structure of the Urban Economy*. Published for Resources for the Future by Johns Hopkins Press.
- Muth, Richard F. 1969. *Cities and Housing: The Spatial Pattern of Urban Residential Land Use*. Chicago: University of Chicago Press.
- O'Brien, Kevin J., and Lianjiang Li. 2005. "Popular Contention and Its Impact in Rural China." *Comparative Political Studies* 38 (3): 235–59. doi:10.1177/0010414004272528.
- O'Brien, Kevin J., and Lianjiang Li. 2006. *Rightful Resistance in Rural China*. Cambridge, England: Cambridge University Press.
- Pistor, Katharina. 2014. "Contesting Property Rights: Towards an Integrated Theory of Institutional and System Change: Global Jurist." Accessed May 19.  
<http://www.degruyter.com/view/j/gj.2011.11.issue-2/1934-2640.1391/1934-2640.1391.xml?format=INT>.
- Su, Fubing, Ran Tao, and Hui Wang. 2013. "State Fragmentation and Rights Contestation: Rural Land Development Rights in China." *China & World Economy* 21 (4).  
<http://search.proquest.com.libproxy.mit.edu/docview/1415374379/F9F87A7EA3EE40B9PQ/1?accountid=12492>.
- Von Thünen, J. H. 1966. *The Isolated State. Translation of Der Isolierte Staat (1826)*. Translated by CM Wartenberg. Oxford and New York: Pergamon Press.
- White, Michelle J. 1976. "Firm Suburbanization and Urban Subcenters." *Journal of Urban Economics* 3 (4): 323–43. doi:10.1016/0094-1190(76)90033-4.
- Yin, Robert K. 2003. *Case Study Research: Design and Methods*. San Francisco: SAGE.
- Yu, Jianrong. 2007. "Social Conflict in Rural China." *China Security* 3 (2): 76–81.
- . 2008. "Emerging Trends in Violent Riots." *China Security* 4 (3): 76–81.