Institutional Innovation and Rural Land Reform in China: The Case of Chengdu

Working Paper WP17RL1

Raul P. Lejano
NYU Steinhardt School of Culture, Education, and Human Development

Hongping Lian
Beijing Normal University

September 2017

The findings and conclusions of this Working Paper reflect the views of the author(s) and have not been subject to a detailed review by the staff of the Lincoln Institute of Land Policy. Contact the Lincoln Institute with questions or requests for permission to reprint this paper.
help@lincolninst.edu

© 2017 Lincoln Institute of Land Policy

Abstract

China has embarked on an important institutional experiment in the area of rural land reform. Responding to lagging rural incomes and the scarcity of developable urban land, the Central Government sanctioned the pilot implementation of a new type of tradeable development right. Referred to as 建设用地指标 (jian she yong di zhi biao) or "construction land quota" in the municipality of Chengdu, one of the pilot sites, the new instrument is used to trade development rights between rural and urban areas. Using a comparative analysis, we describe the essential features of the quota, comparing it to a similar program in Chongqing and to more conventional instruments like tradeable development rights. We argue that extant institutional models come up short in describing distinctive features of Chengdu's quota program and develop the concept of the plenary good as a mode of description. The Chengdu case provides a lens with which to view the larger, national project of constructing a socialist market system. We end the report with a note on the distinctive nature of China's institutional environment, evoking the idea of a Confucian ethos in describing what we refer to as a relational system.

Keywords: China, Chengdu, tradeable permits, quota certificate, institutional innovation, plenary goods, land reform, multicorporality, property rights, relationality

About the Authors

Raul P. Lejano is an Associate Professor at the NYU Steinhardt School of Culture, Education, and Human Development. His research focuses on new analytics for policy and institutional analysis. He also conducts research in the area of social justice and environmental governance. His forthcoming book on institutional innovation in China is scheduled to be published in 2018. His book, Frameworks for Policy Analysis: Merging Text and Context (Routledge), is also available in Chinese and is published by Tsinghua University Press (政策分析框架—融合文本与语境). He is co-author of the book, The Power of Narrative in Environmental Networks (MIT Press). He can be contacted at:

NYU Steinhardt School
239 Greene Street, Room 424
New York, NY 10003 USA
+1 949 8128150
lejano@nyu.edu

Hongping Lian is an Associate Professor in the School of Government at Beijing Normal University and the Vice Dean of the Academy of Government at Beijing Normal University. Her primary areas of scholarship are land policy and housing policy. She has co-published a monograph The China Well-Being (Minsheng) Development Report 2012. She is also a co-author of the forthcoming book on institutional innovation in China. She can be contacted at:

School of Government
Beijing Normal University
No.19, Xinjiekouwai Street
Haidian District, Beijing, P.R. China
+86 5880-8176
hplian@bnu.edu.cn

Acknowledgements

The authors would like to thank Kate Austermiller and Zhi Liu of the Lincoln Institute for their support of this work. We also thank an anonymous reviewer for insightful comments and questions. Thanks also go to the two students from Beijing Normal University, Youbin Yu and Wenxuan Shen, who assisted us with the field interviews. This research was funded by the Lincoln Institute (Agreement Reference # CRL021616).

Glossary of Terms

English	Chinese	Pinyin
Agricultural Exchange Center	农交所	nong jiao suo
Agricultural Land	农用地	nong yong di
Central City Area	中心城区	zhong xin cheng qu
Chongqing City Land Exchange Center	重庆市土交所	Chongqing shi tu jiao suo
Collective Construction Land	集体建设用地	ji ti jian she yong di
Comprehensive Land Consolidation	土地综合整治	tu di zong he zheng zhi
Conditional Buffer Zone	有条件地缓冲区	you tiao jian di huan chong qu
Construction Land	建设用地	jian she yong di
Construction Land Quota	建设用地指标	jian she yong di zhi biao
Construction Land Ticket	建设用地票	jian she yong di piao
Deliberation Panel	评审小组	ping shen xiao zu
Deliberative Mechanism	议事机制	yi shi ji zhi
Distribution Agreement	分配协议	fen pei xie yi
Guiding Price	指导价	zhi dao jia
Household Registration	户口	hukou
Quota Certificate*	指标证书	zhi biao zheng shu
Quota Plan Compensatory Adjustment*	计划指标的有偿调剂	ji hua zhi biao de you chang diao ji
Quota Price*	指标价款	zhi biao jia kuan
Quota Transaction	指标交易	zhi biao jiao yi
Land Exchange Center	土交所	tu jiao suo
Land Ticket	地票	di paio
Link	挂钩	gua gou
Market-Oriented	市场化	shi chang hua
Permit For Access	持证准入	chi zheng zhun ru
Permit Of Use	持证准用	chi zheng zhun yong
Property Rights	产权	chan quan
Rural Construction Land	农村建设用地	nong cun jian she yong di
Rural Land Conversion	农转用	nong zhuan yong
Second-Circle	二圈层	er quan ceng
Social Investors	社会投资人	she hui tou zi ren
Supervisory Committee	监督委员会	jian du wei yuan hui
Third-Circle	三圈层	san quan ceng
Vilagers Council	村民议事会	cun min yi shi hui
Village Committee	村民委员会	cun min wei yuan hui

Table of Contents

Institutional Innovation and Rural Land Reform in China: The Case of Chengdu

Introduction and Background

Over the last decade, China has embarked on significant reforms in its system of rural land ownership and management. While there may be some inclination on the part of scholars to characterize this as a step along a path to a full-fledged private property market, a more careful examination suggests that it may not be as simple as this.[1] This paper argues that what we are seeing is the evolution of institutional designs that are unique in some respects, taking on some elements of a private property market while retaining elements of collectivization. The aim of this paper is to better characterize these changes and to describe how the new institutional model may be something altogether innovative. To do this, we will focus most closely on the pilot program that Chengdu has embarked on around a new form of transferable development rights that links rural farmland to urban development.

China's ongoing experiments in governance are an important real-world laboratory from which to learn about institutional design. This is no more evident than in the area of land use and urbanization, where the scale and pace of such change in China is unprecedented. Moreover, the government's practice of adaptive incrementalism allows us a chance to see a kind of institutional innovation at work. For example, China's leadership routinely evoke the idea of a 'socialist market economy,' but what institutional forms this will translate to is an open question. Leaders will often use metaphors and aphorisms in their speeches when describing China's institutional reforms. Perhaps part of the motivation behind this practice (other than, of course, rhetorical effect) is the open-endedness of the details behind its institutional model, which are being worked out in incremental fashion as we speak (Lejano, Wei, and Li 2017). As Deng Xiaoping once said, China is "crossing the river by feeling the stones."

Our research focuses on a case study of institutional experimentation in the municipality of Chengdu, the capital of the southwest region of Sichuan. The municipality has eleven districts, five county-level cities, and four counties under its jurisdiction. As of 2010, its population stood at 14 million, of which around 4.5 million live in the rural, outermost (third-circle) periphery of the area.[2] Chengdu has been the site of a vigorous process of urbanization, its urban area estimated to have grown from 75 to 807.9 km^2 between 1976 and 2010, with an annual urban growth rate of 7.7 percent (Qu, Zhao, and Sun 2014). Under these conditions, the pressure to convert rural land to urban land use is great.

In 2007, the Central Government selected Chengdu as a pilot area for comprehensive reform under the Commission for Balanced Urban-Rural Growth (CBRUG). Along with the municipality of Chongqing, Chengdu would be a site for experimental use of a new tradeable development permit, the 'quota,' which could be used to transfer land use rights from more remote rural areas to urbanizing areas of the city (PRC NDRC 2007). As discussed below, the

---

[1] Not all scholars assume that a classic system of private property rights is the necessary end of land reform in China --e.g., see Cheng, E. and D. Xiaoqin (2017).

[2] http://www.chinadaily.com.cn/china/2011-07/07/content_12855869.htm accessed February 8, 2017.

new institutional mechanism is a response to a push for reform from both national and local levels.

The paper introduces the background of the institutional experiment—its origins in development agendas at central state and local levels and the evolution of the new quota system. We then compare it against conventional regulatory instruments, as well as Chongqing's closely related program. The paper will attempt to more richly describe the new program, proposing a unique institutional model that better characterizes what is new and innovative about it. This does not imply any value judgements about the new program, as innovations can be sustainable or transient, beneficial or perverse. Towards the end of the article, we sketch out where this evolution of institutional configuration might be headed and why its endpoint is not necessarily a conventional private property market, as implied in some literature.

In our analysis, we develop some concepts that help us better describe the unique properties of these evolving institutions. The idea is to better describe what we will refer to as a relational institutional design, employing notions such as autopoiesis, multicorporality, and relationality.

Initiatives for Land Reform

One important impetus behind reform has been the so-called urban-rural divide. Development has concentrated in cities and stagnated in the countryside. As of 2010, it was estimated that average incomes in urban areas were more than three times that in the rural areas.[3][4] This owes, in part, to decades of government-sponsored industrial development in cities, focusing infrastructure investment in urban places (Park 2008; Ye, LeGates, and Qin 2013), along with higher levels of subsidies/transfers (Yang and Cai 2003) and higher levels of education (Sicular et al. 2006). Compounding this is the considerable income inequality between rural areas, both between and within provinces (Yu, Luo, and Zhang 2007).

The urban-rural divide is exacerbated by constraints to free labor mobility between rural and urban areas. China maintains a residential registration (hukou) program, where people's residential status is classified as urban or rural. Migrants to the city may not have access to the same services and benefits enjoyed by those with urban hukou. The Household Responsibility System, which began in 1978 and grants each rural household usufruct rights to individual plots of land, provides additional incentive for rural residents to stay in place. Notwithstanding the effect of hukou residential registration and household responsibility systems in fixing rural populations to the countryside (Chan and Zhang 2009), rural-to-urban migration has been unprecedented (e.g., see Chan 2013 for estimates).

Proponents for land reform initiatives, such as the pilot program in Chengdu, draw general guidance from the Central Government's directives, such as those set forth in the Third Plenary

[3] NBSC: Urban Household Survey Guideline, http://www.stats.gov.cn/tjzd/gjtjzd/t20090601_402562259.htm; NBSC: Rural Household Survey Guideline, http://www.stats.gov.cn/tjzd/gjtjzd/t20090601_402562258.htm.

[4] Note that some, dated, sources suggest a lesser gap in cost of living --e.g., Brandt and Holz (2004) estimate that the cost of living in urban areas is 39.7 percent higher than in rural areas.

Session of the 18th Central Committee of the Communist Party of China. A relevant passage is excerpted below:[5]

"We will allow rural collectively owned profit-oriented construction land to be sold, leased and appraised as shares, on the premise that it conforms to planning and its use is under control, and ensure that it can enter the market with the same rights and at the same prices as state-owned land. We will narrow the scope of land expropriation, regulate the procedures for land appropriation, and improve the rational, regular and multiple security mechanism for farmers whose land is requisitioned. We will broaden the scope of compensated use of state-owned land, and reduce land appropriation for non-public welfare projects. We will establish a mechanism for the distribution of incremental benefits from land that takes into account the interests of the state, the collective and the individual, and appropriately raise individual income from such benefits. We will improve the secondary market for land leasing, transfer and mortgage."

It is clear that a central concern of the Central Government is the gap in incomes and quality of life between urban and rural areas. State policy also promotes fair treatment of rural farmers whose homestead lands have been expropriated with little compensation. Later in the document are relevant passages that directly support transferable development rights, such as:

"We will select several pilot areas to steadily and prudently push forward the mortgage, guarantee and transfer of farmers' residential property rights, and expand the channels for farmers to increase their property income. We will set up a rural property rights transfer market, and promote the open, fair and procedure-based operation of rural property rights transfer."

At the same time the Central Government sets policy goals toward unified rural and urban construction markets, it stresses the desire to maintain the nation's store of arable land. A recent estimate of arable land shows an average of 0.1 hectares per capita, which is low compared to other nations (Second Land Survey 2015). As a result, the government has set a minimum total arable area of 1.8 billion mu (1.2 million square kilometers or 120 million hectares) as a national policy (CCCP 2014).

On the part of municipal and local governments, there is a constant struggle to find new developable land in the expanding, densifying city. The supply, which is the amount of rural land that the state allows to be converted for urban development, constantly falls short of demand in the fastest growing cities. Along with local government's dependence on urban expansion for revenue (Hsing 2010), the result is a perceived need for new ways to carve out new areas for urban development.

Conventional Procedure for Converting Rural to Urban Construction Land

The current process for converting rural agricultural land to urban construction land might be well described, at least formally, as a system of nested institutions (Ostrom 1995, 41; March and

[5] Decision of the Central Committee of the Communist Party of China on Some Major Issues Concerning Comprehensively Deepening the Reform, January 16, 2014 at http://www.china.org.cn/china/third_plenary_session/2014-01/16/content_31212602.htm accessed February 9, 2017.

Olsen 1998, 995). That is, land allocation proceeds in stepwise fashion, from state to provincial to municipal to local levels and, ultimately, to private parties.

The central government sets the overall framework within which land use planning occurs. A central concern of national leadership has been the steady loss of rural farmland across the country, leading to the "red line" of 1.8 billion mu, as specified in the National Land Use Master Plan. Some scholars suggest that another reason for setting this limitation stems from government's concern over growing rural unrest over land expropriation by local governments and low levels of compensation to the dispossessed farmers (Cai 2011).

First, the central government sets goals for preserving arable agricultural land across the entire country. To do this, it allocates arable land requirements on a provincial level as part of the National Land Use Master Plan. Similarly, quotas for allowing conversion of rural agricultural land to urban construction land are allocated on a provincial level. Each province then allocates its quota to municipal governments, and the latter proceed to allocate their quotas to districts and counties below them which translate these into zoning plans. In turn, townships in each county carry out the allocations on a parcel-level basis.[6]

Property rights differ between urban land, where all land is the property of the state, and rural land, where land is collectively owned by the village. In order to convert land from rural to urban construction land, it has to be first converted from collective ownership to state ownership. This is done by the municipality, acting formally on behalf of the state, which expropriates land from farmers, paying them according to pre-determined rates of compensation. The land is held in reserve in the municipal or provincial land bank, and then leased to private parties through auctions or bid invitations. The funds from the auction are then deposited in the municipal or provincial financial center. Private parties purchase the right to use and benefit from the land for fixed terms (40 years for commercial and 70 years for residential uses).[7]

Expropriation has allowed local governments to obtain a large source of revenue, equivalent to the difference between the amounts paid by the buyers and that paid out to the farmers. The terms of compensation are set according to the Land Administration Law (LAL), passed in 1986 and amended in 1998 and 2004. The LAL sets compensation according to the opportunity cost of the agricultural land. Specifically, it sets compensation for the expropriated land to six to ten times the average annual agricultural output value of such land in the preceding three-year period. This is essentially equivalent to the present value of the future stream of income from farming the land. Contrast this to the amounts received from auctioning off the land to urban developers, amounting to the present value of the stream of benefits from urban use.

In previous work (Lian and Lejano 2014), we discussed the large discrepancy in these two streams of revenue. In many cases, amount received by local government can be more than a hundred times the compensation rate received by the farmers. Moreover, life in the newly urbanizing area proved difficult for the displaced farmers (or 失地農民 shidi nongmin). Amounts received from the land would prove inadequate, given rising costs of living and loss of social

[6] Note: the township is the lowest level of the administrative state, and the village, which exists under it, a unit for self-administration by village residents (Alpermann 2003).
[7] Article 12, Provisional Regulations on Grant and Assignment of Urban State-owned Land Use Right.

services in the city. The inability of farmers to change their hukou (certificates of residence) from rural to urban meant they could not access many services in these urbanizing areas. Having lost their opportunity to farm, many former farmers also find themselves without the needed skills to find work in the city (Lian and Lejano 2014, 5). Attendant to this is the loss of self-subsistence associated with farming (i.e., food, water, and livestock that the farmer's family can live on). Conceptually, one can say that this is a result of the quick transition from collective, rural life to an individualized, urban one. This is signified most of all by the provision, in the LAL, for substituting cash payments for the erstwhile practice of working out re-employment of the farmers (LAL 1998 revision).

A related issue is whether or not the individual farmers really have a say over the decision to sell rights to their collectively-owned farmland. Ambiguity over which collective institution (e.g., village council, township, etc.) oversees these decisions leaves it an open question as to whether or not farmers have a voice in these forums (Ho 2001).

Transition to and Design of the Quota System

This process of stepwise allocation can have inherent inefficiencies, since allocations tend to reflect other considerations, such as inter-jurisdictional parity and bureaucratic formalism. For example, central government allocations cannot reflect, in detail, differing levels of productivity of agriculture (or urban development) across the country. Allocations within the municipality can themselves have inefficiencies. In the case of Chengdu, the municipal government distributes the total quota (for rural land conversion) among its approximately 20 cities and counties equally in an effort to maintain a sense of even-handedness, regardless of the level of demand for urban construction land in these different areas (interview with author).

In order to meet some of the pent-up demand for urban construction land in rapidly growing areas, the Ministry of Land and Resources allowed 20 cities to initiate a Linking program beginning in 2004. The policy was known as "Linking Increase in Urban Construction Land with Decrease in Rural Construction Land," or Link (挂钩, gua gou) for short. The Link program was the forerunner for the present quota program in Chengdu. In order to create new urban construction land, an equivalent area of rural residential land must be freed up and converted back to agricultural use. To do this, the residents have to agree to relocate to higher-density housing elsewhere in the village. This then frees up the former residential area, which is then reconverted to farmland. But the process was slow—because the urban and rural properties were "linked," the reconversion process had to be carried out before the development rights could be transferred to the urban land, a process that took years. Moreover, "Linking" was confined to within-county transfers and, so, matching up urban demand with rural supply from different counties was not possible. But all this changed in 2008.

On May 12, 2008, the great Wenchuan earthquake devastated rural parts of Chengdu. Millions of homes were destroyed. In the ensuing recovery, the government struggled to rebuild homes at a pace needed by those displaced by the earthquake. In response, the government sought to enlist private capital for reconstruction, but the incentives for building in remote rural areas was limited. As a result, the Ministry of Land and Resources relaxed the within-county requirement and allowed linking of rural land consolidation (i.e., building higher-density housing in the rural areas, converting former housing to agricultural land, and transferring development rights to the urbanizing areas of Chengdu). This allowed the demand in more rapidly growing areas of Chengdu to spur investment, across county lines, in consolidation and resettlement in the stricken rural areas (Xiao 2014). Upon a recommendation by Zhou Qiren, a noted economist, Chengdu began piloting the quota system that spanned the entire municipality—i.e., the City of Chengdu and the ten counties around it (interview with author). Essentially, a developer could purchase a quota, generated by consolidation in rural Chengdu, and use it for development of parcels in the Central City (中心城区 zhong xin cheng qu) and so-called Second-Circle (二圈层 er quan ceng) areas.

Comprehensive land consolidation (土地综合整治 tu di zong he zheng zhi) coincided with the acceleration of land registration in Chengdu. To be clear, ownership of the land still belongs to the collective, but land certificates acknowledge the individual household's claim to sole use of the particular parcel. The quota system requires strict accounting of parcels, determining which collective rural land would be subject to the quota program and who would receive compensation. By the end of 2010, about 1.66 million households received titles for rural land for housing or other construction use (Li 2012).

A parallel development was the unification of urban and rural hukou in Chengdu. (Ye and LeGates 2013). Rural residents of Chengdu may now use public and social services in the city after an initial period (one year), when they pay into the urban social security system. Essentially, this does away with much of the distinction between urban and rural hukou.

The Chengdu Agricultural Exchange Center (农交所 nong jiao suo) began quota trading on December 4, 2008. Initial implementation of the quota system was problematic. Demand for the quotas was great, and bids were inordinately high, reaching RMB 920,000/mu at one point. Within eleven days of its first trade, the center was shut down by the Ministry of Land and Resources, fearing it would lead to a sudden increase in costs to urban residents. According to our interviews, urban developers 'panicked' and, fearing they would not know how to negotiate land conversion in far-flung rural areas, started to speculate on quotas in an effort to bank them (interview with author). At that time, the quota was a prerequisite for being qualified to bid for urban land, and developers did not want to be shut out of the bidding.

Ministry officials visited Chengdu to study issues with design of the quota program. They subsequently allowed the exchange to begin operating again only after the Chengdu municipal government revised its rules to require quota acquisition only after a developer has already acquired a piece of property. In a sense, this lowers demand for the quota since developers need only so much as to match the number of properties acquired and not the properties they might potentially bid for. In addition, Chengdu fixed a default guiding price (指导价 zhi dao jia) for the quota of RMB 300,000/mu, which is the level that policymakers felt would suffice to compensate for the work of resettlement and conversion to agricultural land. Evidently, recent demand for quotas has not pushed the price above this baseline, as recent trading data we obtained showed no movement away from the current guiding price.[8] The certificate obtained

[8] It might be assumed that the ceiling price for the quota would create an excess of demand over supply of quotas. However, this was accompanied by a policy to allow purchase of the quota only after a buyer had purchased rights

from quota purchase endows what is now referred to as permit of use (持证准用 chi zheng zhun yong) to differentiate it from the former instrument, which was referred to as permit of access (持证准入 chi zheng zhun ru).

Nonetheless, this represents a significant increase in income to rural households. One source estimates that about RMB120,000/mu was received by farmers in 2012 (Xiao 2014, 186). Compare this to another study, which found a range of RMB16,000-54,000/mu for compensation received by farmers for expropriated land (Li 2012, 61). The municipal government receives a fee of 0.5 percent of the transaction amount, but more significantly, gains revenue from new development in the urban area.

What is unclear from what has been written about the quota program is how compensation for the households on the urban fringe has changed. The city continues to expand outward into these conditional buffer zones (有条件地缓冲区 you tiao jian di huan chong qu). The area where the new development occurs is often on the margins of the expanding city, and development can involve expropriation of land from rural residents. One would think that compensation rates to them should be no lower than that received by farmers in the consolidated area.

Methodological and Conceptual Approach

The primary goal of the research is to characterize the new institutional design of the quota program. In other words, we attempt a thick description of it that delineates in what ways the new institution is unique and even innovative. To do this, we make use of several analytical strategies.

First, we more finely describe the new institution by analyzing differences between it and other models. A number of comparative analyses will be done. We begin by departing from the assumption that the reforms might be tending to a fully privatized private property market. This entails comparing the quota program with a conventional marketable instrument with private property rights. The second comparison will differentiate the quota program from the closely related transferable development right (TDR). Another comparative assessment can be done by differentiating the Chengdu and Chongqing programs. The idea behind the comparative approach employed in this analysis is to emphasize, not isomorphism, but polymorphism—i.e., differentiation of programs to fit context (Lejano 2006; Lejano and Shankar 2012; Lejano 2016).

The second conceptual framework is to view the new institutional design as a set of relationships. Institutions are more conventionally designed as sets of rules or practices. However, they are also new configurations of relationships between different policy actors. The transition from state-owned property to private property regimes is characterized by a transfer of property rights and authorities. However, the new quota system in Chengdu does not attempt

---

to use urban property (thus, avoiding speculative buying of quotas). In addition, quotas cannot be resold to another party but, instead, only directly used for actual projects. Xiao also notes a dampening of demand for quotas, which she attributes to the low ceiling price for the quota being too low for developers to invest in land consolidation in the rural areas (Xiao 2014, 166).

such a clear displacement of rights and authorities. To understand the networked design of the quota system, we describe it in relational terms (see Qiao and Upham 2015).

The empirical evidence consists of archival material (scholarly articles, program material) and interviews. A total of 14 interviews were conducted with: four exchange center staff, one village officer, one academic involved in design of the program, and nine village residents. A portion of the fieldwork was conducted at the Chengdu Agricultural Exchange Center, where collective construction land use rights are traded. Owing to personal relationships with staff in Sichuan Provincial Government, one of the authors gained access to the Center by way of official introduction, and the research team was able to interview a person who played a key role in drafting the quota program, who was one of the staff in Chengdu Bureau of Land and Resources and is now the assistant manager at Chengdu Agricultural Exchange Center. This person was one of our main informants. He also introduced the team to another interviewee, a university professor who was his colleague in the Chengdu Bureau of Land and Resources and also involved in the design of quota program.

In order to understand how the quota program is processed, the research team also interviewed several other staff in the exchange center. The research team then visited several villages they mentioned and interviewed several villagers at random to see the outcome of the quota program. Interviews were digitally recorded, transcribed, and translated into English. The research team also visited the Agriculture Exchange Center and observed proceedings and collected archival information (trading data, trading rules, etc.).

Analysis

Before we characterize the unique and innovative institutional features of the quota program, we first describe the incremental process of program design and then lay out the details of its design below.

Institutional Evolution of Chengdu System

We briefly review the process by which institutional design occurred in incremental fashion (akin to "crossing the river by feeling the stones"). The Chengdu quota system, initiated in 2008, is now quite different from the initial design, which underwent three design phases, as discussed below.

<u>Policy Relaxation Phase of Post-Quake Reconstruction</u>

In 2004, the State Council proposed, in the Decision on Deepening Reform and Strengthening Land Management, to encourage rural construction land consolidation and to link the increase in urban construction land with the decrease in rural construction land. Thereafter, the Ministry of Land and Resources started to set up pilot areas of link programs, and Chengdu was among the first pilot areas.

As one informant shared with us: “Chengdu is in fact, doing best in terms of the Link policy. The first pilot project was conducted in Changxing Village in Bi County, Chengdu. At that time, the project was very effective so as to be attached high importance by the Ministry.”

Official documentation about the quota program was formally issued in 2006. Linking was confined to within-county transfers and, so, matching up urban demand with rural supply from different counties was not possible. But as discussed before, the Wenchuan earthquake of 2008 forced a change in policy (i.e., relaxing the within-county requirement for linking of rural and urban land).

When the Link policy was applied to the reconstruction site at the disaster-stricken area, cross-county linkages were permitted. For example, a Qionglai index could be used at Shuangliu, Wuhou, Jingjiang areas, etc. But Document no. 10 issued by the State Council in 2010 clearly stated that the Link policy cannot be done across different counties, the only exception to this rule being the reconstruction for disaster-stricken sites. The policy relaxation phase of post-quake reconstruction was followed by the regular period. The Link policy needed to be revised accordingly.

Trial Operation Phase of ‘Permit of Access’ (持证准入 chi zheng zhun ru)

The Chengdu Agricultural Exchange Center (农交所 nong jiao suo) began quota trading on December 4, 2008. As mentioned earlier, speculation-driven demand for the quotas drove their price to levels higher than officials thought acceptable. Within eleven days, the center was shut down by the Ministry of Land and Resources.

Optimizing Phase of ‘Permit of Use’

The Ministry subsequently allowed the exchange to begin operating again in April, 2011 only after the Chengdu municipal government revised its rules to require quota acquisition only after a developer first acquires a piece of property. Eventually, a default guiding price of RMB 300,000/mu was settled upon.

The Design of Chengdu’s Quota System

We now describe, in more detail, the design features of the quota program, before proceeding to the comparative institutional analysis.

Chengdu, located in the western edge of Sichuan Basin, is the provincial capital of Sichuan Province. Chengdu served as the economic, cultural, logistical, and technological center in southwest China, and built a competitive and broad industrial base which now helps the city maintain its leading position in the region. In the rural parts of Chengdu, 60 percent of the land area is comprised of sparsely populated hills and mountains, the remaining 40 percent of land is found in the plains, where population density is high and the conflict between people and land is intense. How to maintain the arable “red line” and ensure food safety, to provide powerful guarantee for the rapid development of urbanization and industrialization, and to solve agriculture issues and balance the urban and rural development at the same time, has become a primary area of tension in Chengdu's economic and social development process.

The policy of Linking Increase in Urban Construction Land with Decrease in Rural Construction Land, or Link (挂钩 gua gou) for short, was formally put forward by the decision, declared by the State Council in 2004, to deepen the reform and facilitate land transfers. The Ministry of Land and Resources launched a pilot project linking the increase and decrease of urban and rural construction land (建设用地 jian she yong di) in some provinces and municipalities throughout the country since 2006, and Chengdu has become the first batch of pilot cities. In 2007, the State Council designated Chengdu and the neighboring municipality of Chongqing as "National Comprehensive Reform Pilot Regions for Coordinated Urban-rural Development." In October 2008, Chengdu established the first rural property rights exchange center in the country. After finishing the conferment of ownership certification, the reform of rural property rights in Chengdu initiated the practice of quota transaction.

The specific operational procedures of the construction land quota transaction system in Chengdu are as follows:

<u>Quota Generation</u>

There are three steps to the quota generation process. First, developers consolidate the rural collective construction land (including homestead and subsidiary facilities, land for township enterprises, rural public facilities, and public welfare construction land) and reclaim it as arable land. Second, the reclaimed construction land would be assessed and checked (i.e. construction land quota), deducting the land reserved for the farmers' concentrated residential units. Third, the Chengdu Municipal Land Resources Bureau would register detailed information about the construction land quota and issue a Construction Land Quota Certificate for developers. The certificate indicates the technical information about the generated site, including acreage, acceptance projects, and so on. According to the regulation, if developers use the saved collective construction land directly, they would not receive a Construction Land Quota Certificate.

<u>Quota Acquisition</u>

The construction land quota can be obtained in either of two ways: through consolidation projects or market transaction. Natural persons, legal persons, and other organizations can purchase construction land quotas from the agricultural exchange center.

<u>Quota Transaction</u>

The construction land quota, which is obtained by developers through comprehensive land consolidation projects, can be used directly by the developer or sold via public transactions at the agricultural exchange center. The construction land quota is valid for two years from the original generation or last transaction. During the period of validity, the quota cannot be transferred a second time. If the quota holder fails to use the quota within the prescribed time limit, the Chengdu Municipal Government shall buy the quota back at the minimum protective price published that same year. The minimum protective price of the construction land quota is based on the cost of implementation of a rural land consolidation project, including the construction of rural infrastructure, public service facilities, and rural housing construction.

Quota Usage

Holding a construction land quota is the precondition for the purchase of state-owned construction land. The bidder shall possess the corresponding area of construction land quota, and only then will the bidder sign the State-owned Construction Land Use Right Transfer Contract upon successful bidding for state-owned construction land (excluding industrial land) that falls within the so-called second-circle (or peri-urban area) of Chengdu City. If bidders bid for state-owned construction land (excluding industrial land) sold for the first time in the third-circle counties, they shall pay an amount equal to the price of the corresponding area of construction land quota (according to the minimum protective price announced by the municipal government that same year). Only then can the State-owned Construction Land Use Right Transfer Contract be let.

Quota Revenue Distribution

If the rural collective implements the comprehensive land consolidation project, then the collective shall receive the net revenue from the generated quota. If investors or the official land consolidation department (who are entrusted by the collective) implement the land consolidation project, then a portion of the benefit will accrue to them. After the construction land quota transaction, the supplier shall pay the infrastructure supporting fee at 10 percent of the transaction price. If the quota is used directly rather than transferred in the agricultural exchange center, it is also necessary to pay the infrastructure supporting fee at 10 percent of the negotiated price or the minimum protective price. The municipal government of Chengdu collects the infrastructure supporting fee, and then returns it to the district government where the consolidation project is located to improve infrastructure construction in rural areas. The cost of planning, surveying, designing, reclamation, checking, and other necessary fees, like the cost of infrastructure supporting and public service facilities in the concentrated residence, shall be shared by the peasant collective, farmers, and investors. If the rural collective raises funds and finishes the project itself, the cost can be distributed between the collective and the individual participating farmers, according to agreed-upon local arrangement. A resident who gives up their homestead and foregoes living in the concentrated residence, may be paid the price of corresponding homestead reclamation area, after deducting the cost of homestead reclamation and other necessary expenses.

Distinguishing Chengdu's Quota Program from Conventional Market Approaches

One way of delineating how a new program is unique or innovative is by comparing it against an established or conventional institutional template (as in Lejano and Shankar 2013).

The market platform for the system

To design the construction land quota transaction system, experts from the economic, financial, legal, and other fields worked with various departments, holding more than twenty special meetings and modifying relevant policy documents more than sixty times. During the "two sessions" in 2007, provincial and municipal leaders, including governor Jufeng Jiang and the provincial party secretary Chuncheng Li, made a special trip to the Ministry of Land and Resources to support of land reform efforts, including the quota transaction system. Through this arduous planning process, Chengdu was officially approved to become one of only two pilot cities in the country to explore quota transaction (the other being Chongqing) by the Ministry of Land and Resources in 2007.

In October 2008, Chengdu established the first rural property rights exchange center in the country. This center has become the market platform of the system. Though the quota system aims at a market mechanism, it still includes limiting conditions and special stipulations to protect local interests—e.g., investigating whether the land consolidation project is consistent with land use plans, verifying whether the farmers are aware of the project and participate in it, preserving local environmental amenities such as hills or pools, etc.

Comprehensive land consolidation work in Chengdu Municipality has become a central piece in the national government's rural reform effort, which has been endorsed by the Ministry of Land and Resources. In 2010, after years of discussion, Chengdu municipal government put forward a new idea, which includes promoting innovation in rural land comprehensive consolidation mechanism, serving peasant collectives and farmers as the dominant power rather than the government, encouraging social investors to participate in rural land reclamation, putting the saved construction land quota to tangible land market to trade publicly, with all proceeds returning to the rural area.

After eight years of development, the Chengdu rural property rights exchange center adheres to a market-oriented concept, and actively pursues system innovation. It initiated the development model of "one trading platform and three-level service system," which includes the three levels of "municipality, county, and township". A "six unified" management model has been established including unified trading rules, unified transaction verification, a unified information system, unified service standards, unified supervision, and unified transaction settlement. Such an institutional system generates many benefits, such as encouraging various types of rural property rights to join the transaction, activating the rural market, liberating the values of rural property rights, increasing the income of rural collective economic organizations and farmers, and others.

As of June 30, 2016, the Chengdu rural property rights exchange center had achieved 12,997 cases of various kinds of rural property rights transactions, with a total turnover of RMB 5.32 billion. The scale and variety of transactions influenced similar exchange centers nationwide. At present, Chengdu municipal government continues to make vigorous efforts to support the Chengdu rural property rights exchange to build the provincially comprehensive rural property trading platform, to cover the whole province, and strive to build a rural property rights trading market with complete functions and orderly circulation.

What is different about Chengdu's market instrument?

Much of the commentary on China's ongoing institutional reforms paints it as an inexorable march toward full marketization of property rights and other aspects of the economy. Part of this is undoubtedly true and, in fact, explicitly stated in the Central Government's platform—e.g., the Third Plenum's directive to "promote market-oriented reform… promote resources allocation according to market rules, market prices and market competition, so as to maximize the benefits and optimize the efficiency."[9] On the other hand, the Party still points to the need to "strike a balance between the role of the government and of the market" and, specifically referring to land use rights, establish a mechanism that "takes into account the interests of the state, the collective and the individual…"[10] It is our thesis that, in part, the joint and multiple nature of the goals surrounding land reform reflects on the design of the quota system, and what has evolved in Chengdu is something unique.

The conventional market-based design is one that maximizes efficiency within external constraints like zoning, building height and density requirements, and others. It is through these constraints that the state protects public interests. But, within these bounds, the trade of goods is itself geared around maximizing individual (and, through the 'invisible hand,' aggregate) utility. In China, however, we may find institutions designed upon the simultaneous pursuit of multiple values—i.e. not just efficiency, but equity, stability, and coherence with the network of relations. For this reason, we might find something like a quota program to be designed and implemented to pursue these multiple goals. To do this, decision-making cannot be simply left to individual buyers and sellers but, instead, shared in a network of interested parties. It is a form of networked decision-making, wherein individual and collective units negotiate jointly with the local government and private interests.

The Chengdu quota program might be understood as a form of TDR (Transfer of Development Rights), which has now become a conventional development tool in the U.S. and other countries. While the term TDR encompasses a broad range of configurations, we can describe some of the most commonly found features. Like in Chengdu, it is an exchange of rights to develop and use land for desired purposes between two areas: a sending area, where land is to be conserved or a certain non-urban land use maintained, to a receiving area, where development is allowed (Pruetz and Standridge 2008). The owner of the parcel in the sending area and the developer negotiates a purchase price, after which the developer can use the TDR to build additional development in the city. These have been used for various purposes, such as preserving farm or forest land in the countryside (Nickerson and Lynh 2001) to saving historic landmarks in the city (NYC DCP 2015).

TDRs are based on a conceptual/legal framework that treats property rights as a bundle of goods. In this bundle are elements which include rights to own, use, lease or rent land, and possibly others. The conventional form of right is that of fee simple private property, where the owner, by virtue of purchasing the property, possesses all the rights of ownership, usufruct, and use

[9] Decision of the Central Committee of the Communist Party of China on Some Major Issues Concerning Comprehensively Deepening the Reform, January 16, 2014 at http://www.china.org.cn/china/third_plenary_session/2014-01/16/content_31212602.htm accessed February 9, 2017.
[10] ibid.

(Kaplowitz 2004). When viewed as a bundle of rights, some elements such as the right to use may be severed from the rest of the bundle and transferred. With a TDR, this would be the right to a restricted category of use such as urban development. The seller still retains the ownership of the property and use that excludes the specific right that was traded away (e.g., commercial development). Sometimes, the location of the sending and receiving areas are contiguous (i.e., part of a continuous special development zone), but more generally, they can be in completely separate areas. The theory is that transaction costs will be kept as low as possible, meaning that negotiations are conducted directly between two private parties through an efficient mechanism that allows these parties to locate each other (e.g., through an exchange). Having conducted the transfer of the right, the developer then proceeds to carry out the project without much additional transaction. Our analysis will use this conventional model of the TDR against which to compare Chengdu's quota program.

It is evident that Chengdu's program shares much of the design of the conventional TDR and, in fact, it can be classified as a type of TDR itself. But there are important elements that make Chengdu's program unique or, at least, distinct from the conventional description of the TDR.

In Chengdu, the right to develop a parcel to commercial or residential use is severable from the property itself, as with the conventional TDR. However, it is not divisible (or individualized), in several respects. First, while individual farmers and their households are consulted, the transfers require the entire collectively owned area in order to be converted into a quota.[11] Individual, noncontiguous parcels cannot enter into a quota agreement on the supply/sending side. At a minimum, decisions have to be reached by the group of affected farmers collectively. In practice, a host of other players are involved. The village collective formally transacts on behalf of the farmers. The local government (municipality or township) manages the consolidation process, which involves selecting the parcels, reclaiming it for agricultural use, and moving the families to higher-density housing. In Chengdu, the consolidation process can be managed by companies that specialize in it. Beyond indivisibility of rights and responsibilities, the quota program also inherently involves the joint action of multiple groups (i.e., not just the collective but the municipality, local developer, and other village units described below). As we will discuss later on in this report, this is a mode of transaction that distinguishes the quota program from conventional market instruments like the TDR. Throughout the remainder of the report, we will refer to the ability of an individual actor to negotiate as an individual as "autonomy." The converse (non-autonomy) is, as with Chengdu, when the actor (which can be an individual or a group) must collaborate with other actors/organizations in order to decide on and conduct the transfer.

The joint nature of decision-making around the quota program means that multiple actors, in multiple levels of governance, are involved in the transaction. There is much that is unique about the arrangement found in Chengdu and, later, we will use this example to construct an alternative institutional model that, while applicable to every context, is well delineated by the Chengdu case. Joint decision-making allows, formally, consideration of multiple societal goals. Note that we do not assume the motivations behind it to necessarily be benign. Perhaps, some local actors

[11] This could involve increased transaction costs over the conventional individual transaction. With the quota, part of these transactions costs would involve the time and effort spent at mobilizing community and engaging it in joint decision-making.

pursue these reforms not out of concern for the welfare of rural households but simply to maximize the potential revenues from urban development. Perhaps, as some authors claim (but not something we discovered in our own interviews), new opportunities for rent-seeking allow some individuals to earn extra income. But, as we will discuss later, the mere construction of an institutional mechanism that gives a role to multiple parties opens up the process for multiple rationalities. To compare it to something more familiar, in the U.S., the design of the real estate market is such that concerned individuals have no say over creeping gentrification or the loss of open space, since the market is designed as purely private transactions. And, of course, these problems are found in Chinese cities, as well, but there is a possibility for an alternative logic with a differently designed institutional mechanism.

What are the other societal goals that might be achieved by this type of networked decision-making? There is, as in a private property regime, the benefits to the sellers and buyers. But there is also the benefit of equity when the village collective is involved, as individual rural homeowners do not have to negotiate individually because, were they to do so, might end up with poorer terms or compensation rates that vary from person to person. Were the negotiations individualized, the natural monopsony (a few large buyers, many individual sellers) might lower the levels of compensation. There are benefits vis-à-vis the process of relocating, as well, since households do not move on their own but, instead, are part of a group transition. The local government, to the extent it participates, oversees the process and maintains standards for the consolidation projects. There are benefits to the state, such as preservation of arable land, avoidance of rural unrest, and control over the growth of its cities. The state participates indirectly, when it sanctions the new institution or corrects it (such as when initial prices for quotas were too high).

The construction land quota transaction system continues to evolve and, at this time, is not a completely unified market. At present, there are two markets: that for rural land consolidation (the supply side) and the market for city estates (the demand side). The current supply side is fully marketized while the demand side is not, which takes pricing listings rather than open bidding. In other words, Chengdu's construction land quota system is an institutional innovation based on the Link policy rather than a completely marketized property exchange regime. Why not have open bidding on the demand side? In the discussion that follows, we introduce the notion of autopoiesis and will argue that the design of the quota market corresponds to a sociopoietic, rather than autopoietic, system.

Distinguishing the Chengdu and Chongqing Programs

In December 4, 2008, Chongqing conducted the first auction of its new quota program. Shortly after, on December 17, 2010, Chengdu would do the same (Cai 2014, 77).

Our interviews and archival material suggest a deliberate effort, on the part of policymakers in Chengdu, to differentiate their quota program from Chongqing's. This is reflected in terminology, first of all. Chongqing's program preceded Chengdu's, and the former instituted what it termed the Construction Land Ticket (建设用地票 jian she yong di piao, or di piao, for short). Chengdu, which had initially used the same term, subsequently called their transferable permit the Construction Land Quota or Index Certificate (建设用地指标 jian she yong di zhi biao)

(Document no. 27). Sale of the certificate is referred to as a Quota Transaction (指标交易 zhi biao jiao yi).

One of the first areas of differentiation begins with the process of conversion of rural construction land (建设用地 jian she yong di) to agricultural. In Chongqing, this is all done by the municipal government with the townships and village committees acting as developers (Xiao 2015). Chengdu, however, has tried to cultivate local entrepreneurs around this process and encourages local developers to plan and implement the conversion process. This allows Chengdu to take advantage of private capital and private entrepreneurs to conduct this time-consuming and expensive work (Xiao 2014).

In Chongqing, the total amount of land tickets (地票 di piao) sold each year is capped at no more than 10 percent of the total construction land allowance received from the Central Government. Despite the crimp on supply, prices for Chongqing's land tickets were not as high or as volatile as those of Chengdu's quotas, though it did rise to RMB 250,000/mu one year (Xiao 2015, 95). Early trades revolved around RMB 80,000/mu and, to this day, prices hover around two-thirds of those in Chengdu (Cai 2014). This may reflect differences between the two municipalities; Chongqing, being larger than Chengdu, may have a larger potential supply of consolidated land and a 'thicker' market than Chengdu, despite the cap on dipiao. Property values (i.e., lease prices) are significantly higher in Chengdu than Chongqing.[12] Doubtless, it should also reflect the particular history of each institution and the details of the design of their tradeable instruments.

The logical sequence of purchase of the quota and development rights over a parcel differ, as well. In Chongqing, a developer (or other buyer) who wants to bid for a parcel of land in the urbanizing area needs to have purchased a quota first. In contrast, in Chengdu, purchase of the quota is required only after the buyer has already acquired the urban development right. As previously discussed, Chengdu decided on this practice in order to lower the demand, level of speculation, and price for the quota.

In our interviews, some informants suggested that this may result in more rent-seeking behavior on the part of developers in Chongqing and more administrative effort on the part of the municipality, compared to Chengdu. The comments, from one staff member from Chengdu, are shown below.

[12] https://www.numbeo.com/property-investment/compare_cities.jsp?country1=China&country2=China&city1=Chongqing&city2=Chengdu&tracking=getDispatchComparison accessed February 8, 2017.

"…Chongqing designed their auction this way. After you buy the land ticket, you choose a (parcel of) land. But if you weren't able to obtain the land, then whoever bought the land will return the money to you, equivalent to giving you the money for the land ticket. It was designed like that, but in reality, this doesn't happen. That is, if I have chosen a (piece of) land, I will do everything I can to get the state-owned construction land in my hands. Honestly, there is too much room for negotiation. I'll give an inappropriate example. Say there is a piece of arable land near the People's Liberation Monument, can I also use the land ticket to get it? If, in the end, I can do it, then I will be super-rich. This kind of theoretical situation may, in fact, exist. There are many strategies, to exclude others."

In principle, a developer in Chongqing purchases a quota and, then, is not able to successfully bid for a parcel, then the quota goes to waste (ultimately to be purchased by the successful bidder). In practice, however, this usually does not happen, since the municipal government works with the developer to secure a parcel (Cai 2014, 75), in some cases maybe even getting special privilege in selecting which parcel to take (Xiao 2015, 10). At any rate, the local government in Chongqing assists the quota holders in securing urban land use rights. In Chengdu, on the other hand, developers have less discretion over which parcel they end up with—i.e., after winning a bid, they are simply assigned a parcel by the municipal government or choose from a pre-prepared list (interview with author). Formally, the rules found in Chongqing and Chengdu are not dissimilar, so one surmises that part of the story lies in differing relationships between actors in both places.[13]

Characterizing Local Decision-Making around Land Consolidation

One stated goal of the reform was to strengthen the degree of participation of community residents. In fact, this may have been the point most greatly emphasized by the interviewees. In this section, we describe the process by which the village reaches a decision around land consolidation and quota generation.

There are multiple groups involved, and the exact nature of the process undoubtedly varies from community to community. In general, decision-making revolves around the village council (村民议事会 cun min yi shi hui), which is made up of representatives from each village group, and each representative serves a three-year term. The council takes up issues and votes on it, with a 2/3 vote required to pass a motion. For an issue such as land consolidation, there is a prior discussion where village groups meet with each household. Village groups recommend consolidation to the council if all its households agree to it. In principle, each household should have equal say in the matter. This process, by which each individual household can choose to participate in land consolidation or not, is a type of right that can strengthen the bargaining power of the individual farmer. It is further strengthened by the municipal government's initiative toward land titling (Li and Wang 2012).

[13] It is not clear to the authors why the Chongqing municipal government might be more proactive in assisting developers to locate urban parcels than Chengdu. Presumably, it is based on the nature of relationships between these and other parties in the two places.

The details of the process are then worked out in council meetings. The villagers' general assembly authorizes the council's recommendation and enters into an agreement with the Bureau of Land and Resources. Proceeds from the quota transaction are distributed among resident households according to arrangements decided within each village group. There is, in addition, a supervising committee which oversees project implementation.

In addition to the village council, there are other bodies that are involved in the process. This includes the village committee (村民委员会 cun min wei yuan hui), a supervisory committee (监督委员会 jian du wei yuan hui), and a deliberation panel (评审小组 ping shen xiao zu), all of which share in the overall process of deciding on and implementing the consolidation project.

The process of consolidation, itself, can be planned and carried out by the local government or specialty contractors working for the village. These are often referred to as social investors (社会投资人 she hui tou zi ren), which seems to allude to sources of capital outside the government. In some cases, village residents can set up a group asset management company and mortgage their land use titles to obtain loans to implement the project themselves (interview with author). The policymakers we interviewed all saw the local process of deliberation as an important reform. We quote one of them below (whose positive impressions about deliberation was echoed by other interviewees).

> "First of all, the reform of rural property rights system, that is issuing the certification of land rights. We want to clarify property boundaries. Second, to renew the grass-roots governance mechanism. This is very important. What do we rely on? The village council will promote all the major affairs and decision-making. It's no longer the sole decision of the so-called village head, village director, and village secretary. Not them, but the people elected, similar to how it is with Western parliaments. The village council, grassroots democracy, yes, this is very important. That every major event has to go through this deliberative mechanism 议事机制 (yi shi ji zhi)… Rural land consolidation is basically a combination of the previous things. First, you need to have the right of the land before you can consolidate the land. You need to know who has a large family, which households are smaller, so that when you participate in the project, there is a basis for you to distribute the money. Second, how you would implement the plan will also rely on the new deliberative mechanism. You need to have the spirit of ownership in order to actively promote the project."

The somewhat bureaucratized, formalistic structure of local deliberation can be interpreted as increased transaction costs. But this formalization may be a necessary step in democratizing land use planning. While state policy has hailed the rights of the village collective, there has always been ambiguity over what the collective is, exactly, and who represents it. Some scholars suggest that this has opened up the process to manipulation by local elites (e.g., Po 2008). There is more structure to local participatory processes now.

Our interviews suggest a general accepting attitude, leaning toward ambivalence, toward the village council process, but most of the informants thought the process was fair. One resident shared her thoughts, below.

The research team spoke with a 71-year old resident from Nan Xin village, which recently went through the land consolidation process. She received 11,900 RMB (USD 1,785) from the transaction of cultivated land in the village collective. In addition, for every homestead that was demolished, the government paid about RMB 1,100 per square meter per head, based on the cost of materials. This supplements her monthly social security income of RMB 330. The consolidation was agreed to by all voluntarily, she said, partly because there was less reason to stay in their homestead properties anymore.

"Young people don't want to stay at home anymore. They all left, and it is hard for old people to do farm work, and the old houses are too big for those who are left behind… You don't get much from a mu of land. Corn is sold at 1 RMB a catty, and a mu of land can only produce a few hundred catty. If you work outside, you might earn 2,000-3,000 RMB a month [so] nobody wants to farm lands anymore. Young people all left, only the elderly still stay at home, with some small children (still studying)."

And she had a positive opinion about the new village council:

"We elected the members ourselves. We hold general meetings, and members openly discuss and decide on matters together. The peasants are very much respected… At the general meeting, you can voice your opinions and voting is done anonymously. We discuss matters like road building, and if you consent, you sign, and if not, then don't sign. But most people sign."

About 80 percent of those interviewed echoed similar, positive impressions (note: no village officials were present at these interviews). The above comments suggest some positive development in local participation, but they also speak to the larger issue of the decline of rural agricultural livelihoods.

Characterizing the Institutional Model

It seems to us that institutional scholars over-emphasize the disjuncture between public and private property regimes (as political scholars have over-emphasized the divide between socialist and capitalist). Part of it is a failure to imagine what a market-centered socialist system would look like. The response, on the part of scholars, is to suppose that China's land management system is progressing into a fully Westernized private property market. The central government is undoubtedly not absolutely clear, itself, what a socialist market economy would look like, hence its unique form of incrementalism, where it relies on localized institutional experiments (such as Chengdu and Chongqing) and its unique form of "governance by metaphor."[14]

Another difficulty is the relatively narrow classification schema used in the institutional literature to define property rights. The public-private distinction, mentioned above, is paralleled by a conceptual framework around types of goods. The classic schema is to categorize private goods as those that are rival and excludable, and public goods as those that are non-rival and non-excludable. In between these two are club goods (non-rival, excludable) and common-pool resources (rival, non-excludable).

[14] Lejano, Li, and Wei (2017), Governing by Metaphor, LKY School of Public Policy, working paper.

But where would we locate collective property, such as rural collective land in China? Is it a club good or more like a private good? Or is it something altogether unique?

In this section, we proceed to refine the typology of goods, in order to better characterize the complex nature of property rights in China. The main idea is that there is something unique in the property regime evolving in China that extant classification systems do not fully capture.

Let us proceed methodically through the argument. First, we recognize that rural collective land is excludable (i.e., it is assigned to one collective and no others) and, so, cannot be considered a public good.

Might it be considered a club good, where a group (not an individual) has ownership over the resource? We think otherwise—unlike a classic club good (which is non-rival), use of the land by one farmer eschews use of the same plot by another—i.e., it is rival. But, it clearly is not a private good, since the individual farmer, whose use of a parcel precludes use by another farmer, does not own that parcel.

This suggests a third descriptive which is divisibility of the right. In the case of a private good, the right over the land (which includes ownership, but also authority over its use or disposition) is divisible among individuals using the resource. But this is not the case with rural collective land where, even when the municipality assigns titles to individual parcels or individual households, ownership is still collectively shared and indivisible. The collective, in this case, is ambiguous, but for simplicity's sake, we can take it to mean the group of individual farmer/households with a claim to the land. In this case, the entity is not the individuals that make up the group but the group itself.

This allows us to define a distinct category, which is the collective good, which can be characterized by excludability, rivalry, and indivisibility.

The question is, can rural collective land in China be considered a pure collective good? We propose that, if we did, it would be a special class of collective good. The reason for this is the complexity of what the collective, and the overlapping nature of multiple collectives, is involved in determining the disposition and use of the land. The ambiguity over what constitutes the collective, which can be represented by different associations (village council, village assembly, etc.), is underlain by a fundamental institutional complexity. First, authority over disposition of the land (i.e., use of it, selling of limited rights to it, and others) is distributed among a number of different and overlapping entities.

An additional level of complexity stems from the fact that the sale of the quota is not simply a transaction between a buyer and seller. Rather, a network of entities is involved in the transaction. The village organizations work with the municipal government and, sometimes, private developers, to plan and implement consolidation and prepare the quota for sale in the exchange. Decisions around when, where, and how to consolidate (and create a quota) involves joint actions by these different entities, and not just the collective owners of the land. This is not simply a nested process of decision-making but a conjoint one. Whereas a private or club good need only require decisions on the part of the individual or club regarding disposition of the property, the system found in Chengdu's quota program requires joint decision-making and action by a set of entities located at different scales or levels of governance. Decisions are a matter for collaboration between farmers, village associations, municipal government, and possibly private parties. Indirectly, the central government is also involved by sanctioning and monitoring the process (occasionally intervening in the process as they did when shutting down the exchange in 2010).

We believe that this is not accidental. The shared form of governance around rural collective land and, by extension, the quotas, correspond to the desire of the state to pursue multiple goals (individual, collective, state) at the same time or, at least, to reconcile them somehow. It is perhaps for this reason that there is no thought given, as yet, to creating a conventional rural private property market.

In a club good, the "club" has decision-making authority over the resource. Reading into the practice of the quotas, the state (through its delegate, the municipal government) sponsors the consolidation and quota creation process. It can have a veto power over such proceedings and, more so, needs to guide it and, often, will be the lead proponent of it. This is a kind of shared governance, where authority and responsibility is collocated in multiple bodies at different levels in the network. We feel this is an important quality of an innovative type of institution. We will refer to this property as that of multicorporality. Because of the joint, all-inclusive nature of authority around quotas, we will refer to these types as plenary goods (Lejano et al. forthcoming).

We have now introduced a new category, called the plenary good, which has the properties of excludability, rivalry, indivisibility, and multicorporality. It is the last property which distinguishes the plenary good from the pure collective good. Multicorporality is the property of shared authority over a good, especially the right to decide on the disposition of the good. This is distinct from Ostrom's notion of nested institutions, which describes hierarchical domains where an actor has purview over a resource within its limited scope of authority. With plenary goods, decision-making is not subdivided, necessarily, but more generally, shared.

Rather, the concept of plenary goods is most closely related to the notion of network governance, where authority over some good or service is shared among multiple actors often located at multiple (sometimes overlapping) locations in a constellation of policy actors. To further delineate the plenary nature of some institutions, we might contrast this with the model of common-pool resources. As Ostrom described it, one solution to the CPR issue is to have local community enact a workable system of use rights over a resource through social capital (mutual monitoring and enforcement of rules). Authority, in this case, is seen to inhere in the local community. In contrast, a plenary good might be jointly managed by local community, regional authorities, the national government, and even private actors.

This gives us a richer set of characteristics for describing institutional models, as shown in figure 1 (where 1 indicates that the characteristic in the leftmost column holds).

Figure 1: Types of Goods: Expanded Classification System

	private	public	common-pool	club	collective	plenary
excludability	1	0	0	1	1	1
rivalry	1	0	1	0	1	1
divisibility	1	0	0	0	0	0
multicorporality	0	0	0	0	0	1

The idea of a plenary good may be relevant to related systems in other parts of the world, such as mixed-ownership enterprises (OECD 2012). But the multicorporal nature of these goods, as we understand them, pertains not just to ownership but decision-making, implementation, and other aspects of stewardship.

The shared nature of governance around the quotas is an important way of protecting different interests. Individual farmers are not subject to the difficulties of individual negotiation to the extent that the village council and municipality intercede for them. The village, itself, may not be equipped, in terms of technical expertise and staffing, to negotiate and carry out consolidation and quota generation. So being, the process can be managed by the local government or private parties. Rather than being nested institutions, where different actors at different levels act separately, these are conjunctive institutions. Rights and roles are not formally separated from one actor to the other—instead, they are embedded in each other. The actual decisions correspond to mixed rationalities (e.g., not just maximizing return on investment, but other objectives as well).

A classic private market is what we might call an autopoietic system. It is meant to function independently of the state, and decision-making occurs only between private actors. The market transaction is a self-encapsulated thing, where it functions outside the intervention of actors (the state, the church, society) outside the private parties involved.

In contrast, we can think of an alternative mode of governance as sociopoietic (Lejano and Park 2015). Going back to the market transaction, in a sociopoietic system, the transaction involves the actions and interests of actors other than the two private parties. The transaction does not occur completely independently of these other institutions, such as local government, the party, etc., and prices are not simply endogenous to the private transaction but something influenced by the interaction of all these actors.

Commentators on China's evolving model of governance will sometimes point to the need for greater primacy of "the rule of law." What they mean by this term is that the law, as a text or encoded set of rules, act like an autopoietic system, where decisions and actions stem directly and only from the encoded text. In contrast, in a sociopoietic system, the text is not all of the institution, and other social forces weigh in, in the implementation of the law. Often, the Central Government will issue directives that are broad guidelines (sometimes using metaphor to describe the policy direction), and it is up to regional or local actors to bring specificity to these through everyday practice. This, of course, assumes that there are sufficient incentives for local actors to spend effort and resources, as well as take the risks, needed for developing new institutional rules and practices.

Sociopoietic systems are relational systems, because the actual institution is determined by the working out of social relationships among policy actors. Describing the relational system goes deeper into this phenomenon by uncovering the nature of the relationships and relating this to how the different policy actors act—this is the micro dimension of relational analysis. There is a macroscopic perspective to characterizing something as a relational system, which is describing the network arrangement that is the web of relationships that make up the system. Conventional ways of describing systems for collective action separate solutions into state-centered, individual-centered or privatized, or communitarian. Similarly, strategies for development are said to vary depending on whether the strategy revolves around the state (e.g., expert bureaucracies), the individual (e.g. markets), or the community (e.g. NGOs and community-based organizations). But what if the actual system involves all these actors working and negotiating jointly? This has been referred to as network governance, but this literature does not really work out what the relationships are between policy actors (simply, that they all act as one group). A relational analysis should be able to delineate how each policy actor acts in the network and to distinguish one kind of network from another.

This pertains directly to property rights. Qiao and Upham (2015) use the term "relational property rights" to describe the system where the actual meaning of property rights (村民议事会 chan quan) depends on the set of social relationships (between village, individual, business, and state) in a place. When the actual institution is determined by the working out of social relationships, then formal rules and roles will be blurred (Lejano 2008). Formally, the rules behind both Chongqing's land ticket and Chengdu's quota are similar, but networked forms of governance rely on relationships and interactions among a heterogeneous group of actors that cannot be codified as rules. If there is any accuracy to informants' Chengdu claim that a very different political dynamic occurs between developers and municipal government in Chongqing, it reflects the contextual nature of relational systems, where processes and outcomes depend on the working out of complex relationships in particular places.

On the other hand, networked decision-making represents significant transaction costs. This goes against the conventional thinking behind tradeable instruments which are designed to increase the ease of transaction. There is also the possibility of excessive rent-seeking. While interviewees from Chengdu point to Chongqing's system as having the greater potential for influence peddling, the fact is that these possibilities can exist in both systems. And there is the possibility that farmers are not allowed to act as independent agents but, rather, manipulated by local governments and developers seeking to profit from their need for supplementary income.

What is the difference between the relational system just described and the idea of *guanxi*, which describes the central role of interpersonal relationships in fostering and facilitating transactions both in the private and public sectors? These are closely related, of course. In our view, while *guanxi* is all about the importance of interpersonal relationships in improving or facilitating the functioning of institutions, relationality is all about the under-determinedness of institutional design, such that formal features of the program are left unspecified (and filled in by relational processes). *Guanxi* may act like the grease that helps the institutional design to function, but such design can be complete and pre-exists the functioning of relationships. With relationality, relationships form part of the basic essence of the institutional design. For example, a completely designed (or determined) market system will have in place all the rules that determine how prices are set. In contrast, a relational system may allow negotiations within a network of policy actors to influence market prices.

But what is to be gained by the relational system? The answer is corollary to what is lost, which is the independence of the market and autonomy of market transactions. Other considerations can be pursued outside of the private interests of seller and buyer. There are protection mechanisms, at least potentially, for checking the market when it runs off course. The Central Government's intrusion into the quota exchange market, shutting it down when prices rose too much, is a check against speculation. Likewise, the municipality's fixing of the quota price at RMB 300,000/mu is a way to dampen the volatility, increase the predictability of the quota market, and assure villages and "consolidation entrepreneurs" of a reliable return for their project.[15] It is undoubtedly true that there will be allocative inefficiencies with interfering with the market, but there are other goals that are pursued. One is the greater equity of a system where farmers, who might not be able to stay in the market for so long, do not have to settle for a temporarily depressed quota price.

Setting quota prices will be interpreted as an artificial intervention in the smooth functioning of the new market. But perhaps it is just one way to divide up the surpluses accruing from the exchange of property in the urban area with the exchange of development rights in the rural. It is uncertain what the real opportunity costs are to the farmers, whether it is the foregone benefits from farming or potential benefits from future commercial development of their land. And even a smoothly functioning market cannot guarantee that what is received by the farmers will suffice to support them in their new residences.

Collective institutions (such as the village council) protect the individual from the burden of working out complex transactions. Contrast this to the weakened purchasing power of dispossessed rural residents whose land has been expropriated. In previous work, we found much dissatisfaction among rural residents of differing levels of compensation received between one family and another (Lian and Lejano 2014).

Looking Ahead

The question to ponder is: where is the institutional experiment, now underway in Chengdu and Chongqing, headed? The ultimate motivation for local-scale pilot tests is presumably the idea that the new institution might diffuse outward to other municipalities. Pushing the idea even further, one might even conceive of a quota system that extends beyond a single municipality, creating a regional or national trading regime. The idea of opening up its land tickets to a

[15] This logic holds true even when we consider the fact that local government may have faulty information and can get the prices "wrong," as Xiao suggests (2014, 167). Officials will never possess perfectly quantified information since some of these values (e.g., political stability) are never monetized.

national market, even derivatives trading, has been discussed in Chongqing (Cai 2015). The logic of it stems from the nature of the goal of maintaining 1.8 billion mu of arable land, which can, in principle, be anywhere in the country.[16]

But there are potential problems from creating a nationwide quota program. There is a possibility of a loss of balance between productive land uses within each municipality. There are problems to this kind of spatial unevenness—higher transportation requirements for goods and services, greater vulnerability of communities to ups and downs of the economy, and others. Most of all, perhaps, is the loss of cultural resources in the form of rural community life that ever recedes from view.

Where might the institutional experiment be headed? With extensive land titling underway, it will look more and more like a private property regime. If there is a common presumption that the end product is inexorably the creation of a fully privatized rural property market, we suggest it can be otherwise. The question, then, moving forward, is whether evolving institutional rules can maintain some forms of collective decision-making and involvement by bodies located at different levels of the governance structure. Rather than an inevitable evolution of a common set of rules for land transfers, what we may find, in China years from now, might be a rich diversity of contextually designed institutions. The differences in design between Chongqing's land ticket and Chengdu's quota system may foreshadow a more decentralized and richly varied spectrum of designs across the country. Running counter to this, however, is the still present overarching authority of the Central Government, which sets policies that are often simply adopted in toto at lower levels of government.

Most deeply, there is an inherent reduction involved in creating a tradeable good, whether it is the right to commercial development or maintaining the stock of arable land. It is the assumption that the good can be completely captured by the right that is traded. But what is transferred from place to place is not simply a development right or a quantity of arable land—it is, in fact, culture, social ties, and rural communal life. What might ultimately be traded away is a kind of lifestyle and heritage of rural communities, as people move to more urban residential communities and farms are taken over by large corporations. Years from now, the sweep of modernization may transform the country into high-rises and mechanized fields, at a loss of authentic community life.[17]

The process of consolidating rural residential land to free up quotas has its limits, though scholars have differing opinions on how great this potential supply of new urban construction land might be (Xiao 2014; Yuan 2014). Ultimately, discussions will move on to further expanding the process of unifying urban and rural markets, though it is not entirely clear what scholars and policymakers mean by this. It is clear that part of it pertains to unifying or eliminating the hukou system. It is less clear if they mean removing the system of collective

[16] We should note, however, that availability of agricultural land does not necessarily translate into agricultural production, since there are no provisions on maintaining quality of land, productivity of local agricultural communities, etc.
[17] Take the example of the 71 year old resident we interviewed. Though she expressed satisfaction with the community decision-making process, one cannot but detect the hint of nostalgia she expressed for the old way of life in the community.

ownership in rural areas and converting all land to state (or, perhaps, even private) ownership. Most scholars, political scientists and economists alike, tend to assume that land use is best determined by a fully privatized market, but this seems to be a mostly ideological straitjacket. The most important question may be how to foster collaboration between the national leadership, local government, and private capital to carve out development agendas for the countryside, whatever the legal definition of property rights.

The looming problem is how to envision productive livelihoods in rural China, where agricultural households are moving to higher-density towns and away from farming as a lifestyle (Chan 2013). The irony of freeing up hundreds of millions of hectares of arable land that increasingly few are willing to till is not lost on policymakers. At the same time, unemployment is growing in many of China's cities (Cao et al. 2012). If the future of rural China is mechanized agricultural operated by large corporations, will there be sufficient and adequately paid employment for rural residents? If not, what alternative livelihoods are available to them, short of joining the mass exodus to the city? And, without overly romanticizing it, will rural villages and community life disappear?

In conclusion, we might extrapolate from the special case of Chengdu and reflect on what might it mean for China? Though this is pure speculation on our part, we suggest that it is possible that the complex kind of institutional design we saw in the case of Chengdu's quota may be an indicator of a larger institutional logic that may characterize the national institutional experiment. We have already seen how decision-making can be relational, drawing together multiple entities that normally operate in different domains. Contrast this to the classic bureaucracy with its circumscribed authority or the market which reduces transactions to that between two individual actors.

Without exaggerating the point, it may help to see this as a contrast between Weberian and Confucian systems. The classic Weberian ethic is one of utilitarian rationalization and a formal delineation of boundaries (between state and community, public and private). It displays the logic of formal rationality, where authorities and jurisdictions are divided up among policy actors. Rationalization is an optimizing logic, such as when markets are completely privatized in the effort to maximize the utility gains by two private parties, or when an area of regulation is delegated to a specialized agency to maximize pursuit of a public end.

In contrast, the Confucian system is not modeled after optimality but similitude. The ideal government is patterned upon an ideal form, whether as in Taoist terms, is to be found in the heavens, or in Confucian terms, is located in the family and congruent relationships. While we can think about division of labor within a family, the latter is a collective of members bound by relationship. It is not the division of labor but its integration that characterizes the Confucian system. The contrast is between the utilitarian ethic (maximizing efficiency) of the Weberian ideal versus the virtue ethic (working like a family) of the Confucian. Whereas, government in one system emphasizes formal rules and delineations of authority, in the other we find the system to be governed by less-than-formal or underspecified relationships between policy actors. Whereas one exhibits an exclusionary logic that delimits purview over a resource to an agency or to the exchange between two individuals, the other system is characterized by in inclusive logic, where all interact in joint fashion. There are no absolute boundaries between public and private because, in a relational system, the goal is to have interaction between private and public policy actors.

In other words, the Chengdu case may be a harbinger for where China's grand institutional experiment is headed. Scholars might assume that all of it ultimately evolves into a classic Weberian system of governance, where the public sphere is carved up into domains exclusive to different bodies of government and the private is consigned to the arena where private individuals transact to the exclusion of the state. On the other hand, we may see the evolution of more complex systems, where heterogeneous groups of public and private actors interact in ways not completely determined by formal rules but, rather, the relationships between them.

References

Alpermann, B. 2003. An assessment of research on village governance in China and suggestions for future applied research. Beijing: EU-China Training Programme on Village Governance.

Brandt, L. and Holz, C. A. 2006. Spatial price differences in China: Estimates and implications. Economic development and cultural change, 55(1), 43-86.

Cai, M. 2011. Local determinants of economic structure: evidence from land quota allocation in China. Conference paper, 16th Annual Conference of the International Society for New Institutional Economics. November. Available at: http://extranet. sioe. org/uploads/isnie2012/cai. pdf.

Cai, M. 2014. 3 "Flying land". In Teets, J. and W. Hurst, Local Governance Innovation in China: Experimentation, Diffusion, and Defiance, Routledge, New York, 60-83.

Cao, G. Y., Chen, G., Pang, L. H., Zheng, X. Y., and Nilsson, S. 2012. Urban growth in China: past, prospect, and its impacts. Population and Environment, 33(2-3), 137-160.

Central Committee of Chinese Communist Party (CCCCP). 2014. A decision on rural development. www.xinhuanet.com . Accessed February 4, 2017

Chan, K. W. and Zhang, L. 1999. The hukou system and rural-urban migration in China: Processes and changes. The China Quarterly, 160, 818-855.

Chan, K. W. 2013. China: internal migration. The encyclopedia of global human migration, Blackwell.

Cheng, E. and Xiaoqin, D. 2017. A Theory of China's Miracle: Eight Principles of Contemporary Chinese Political Economy. Monthly Review -And Independent Socialist Magazine. 68(8), 46-57.

Ho, Peter. 2001. "Who Owns China's Land? Policies, Property Rights and Deliberate Institutional Ambiguity." The China Quarterly. 166: 408–409.

Hsing, Y. T. 2010. The great urban transformation: Politics of land and property in China. Oxford University Press, New York.

Kaplowitz, M. D., (Ed). 2004. Property rights, economics and the environment. Routledge, New York.

Lejano, R. P. 2006. Frameworks for Policy Analysis: Merging Text and Context. Routledge, New York.

Lejano, Raul. 2016. *政策分析框架* ***融合文本与****语境*, Tsinghua University Press, Beijing, PRC.

Lejano, R. P. (forthcoming). A Phenomenology of Institutions: Comparative Perspectives on China and Beyond. Routledge, New York.

Lejano, R., D. Wei, and Li, L. 2017. Governing by metaphor, LKY School of Public Policy, working paper.

Lejano, R. P., and Shankar, S. 2013. The contextualist turn and schematics of institutional fit: Theory and a case study from Southern India. Policy Sciences, 46(1), 83-102.

Li, L. 2012. Land titling in China: Chengdu experiment and its consequences. China Economic Journal, 5(1), 47-64.

Lian, H. and Lejano, R. 2014. Interpreting institutional fit: Urbanization, development, and China's 'land-lost.' World Development, 61, 1-10.

March, J. G. and Olsen, J. P. 1989. Rediscovering Institutions, New York: Free Press.

March, J. G. and Olsen, J. P. 1998. The institutional dynamics of international political orders. International organization, 52(04), 943-969.

New York City Department of City Planning, NYC DCP. 2015. A Survey of Transferable Development Rights Mechanisms in New York City. New York City, Department of City Planning, February.

Nickerson, C. J. and Lynch, L. 2001. The effect of farmland preservation programs on farmland prices. American Journal of Agricultural Economics, 83(2), 341-351.

OECD, Organisation for Economic Co-operation and Development. 2012. The Governance of Mixed-Ownership Enterprises in Latin America: Discussion Paper, OECD/CAF Latin American SOE Network Meeting, October 2012, Lima.

Ostrom, E. 1995. Designing complexity to govern complexity. Property rights and the environment: Social and ecological issues, 33-45.

Park, Albert. 2008. Rural-Urban Inequality in China. In Yusuf, Shahid (Ed.), China Urbanizes: Consequences, Strategies and Policies, 41-63.

PRC NDRC, People's Republic of China, National Development and Reform Commission. 2007. A notice approving Chongqing and Chengdu to establish national trial and experimental pikot programs of coordinated urban-rural development comprehensive reform, June 7. Beijing (Chinese).

Pruetz, R. and Standridge, N. 2008. What makes transfer of development rights work? Success factors from research and practice. Journal of the American Planning Association, 75(1), 78-87.

Qiao, S. and F. Upham 2015. The Evolution of Relational Property Rights: A Case of Chinese Rural Land Reform. Iowa Law Review 100(6):2479.

Qu, W., Zhao, S., and Sun, Y. 2014. Spatiotemporal patterns of urbanization over the past three decades: a comparison between two large cities in Southwest China. Urban ecosystems, 17(3), 723-739.

Sicular, T., Ximing, Y., Gustafsson, B., Shi, L. 2007. The urban–rural income gap and inequality in China. Review of Income and Wealth, 53(1), 93-126.

Xiao, Y. 2014. Making land fly: the institutionalization of China's land quota markets and its implications for urbanization, property rights, and intergovernmental politics (Doctoral dissertation, Massachusetts Institute of Technology).

Yang, D. T. and Cai, F. 2003. The political economy of China's rural-urban divide. How far across the River, 389-416.

Ye, Y. and LeGates, R. T. 2013. Coordinating urban and rural development in China: Learning from Chengdu. Cheltenham, UK: Elgar.

Ye, Y., LeGates, R., and Qin, B. 2013. Coordinated urban-rural development planning in China: the Chengdu model. Journal of the American Planning Association, 79(2), 125-137.

Yu, L., Luo, R., and Zhang, L. 2007. Decomposing income inequality and policy implications in rural China. China & World Economy. 15(2):44-58.