



Institutional Sources of Reform: The Diffusion of Land Banking Systems in China

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ABSTRACT An important change in China's urban land management system is the diffusion of land banking systems – official agencies that govern local land conversions, preparation, and transactions. In this article, I draw on neoinstitutional theory in organizational studies to explore the forces that promote this transformation. I propose, besides rational calculations and indigenous impetus for reform, institutional forces that play a crucial role in accelerating the diffusion process. Event history analysis shows that, over time, local economic characteristics have a declining effect on the adoption of land banking systems and gradually yield to pressure from peer cities, provincial governments, policy professionals, and policy-making communities. Moreover, intergovernmental fiscal arrangements and political status moderate the effect of provincial pressure.

KEYWORDS China, land banking, neoinstitutional theory, policy diffusion, transitional economy

INTRODUCTION

The past three decades have witnessed China's profound transformation from a centrally planned to a market-oriented economy. One key structural change has been the market's increasing role in allocating resources, including raw materials, consumer commodities, and, more importantly, land resources (Dowall, 1993; World Bank, 2004). Land management issues are important because they closely and crucially relate to China's ongoing transformation. Urban land development planning shapes the landscape and sustainability of rapidly growing cities (Zhang, 2000). Fiscal revenue from land transactions and development projects plays a crucial role in local governments' finances and significantly affects intergovernmental relations (Xie, Parsa, & Redding, 2002). Moreover, the health and stability of the financial and banking sector are intimately linked to land-based transactions and financing arrangements (Development Research Center, 2005).

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In this article, I focus on an important change in China's land management system in recent years, namely the rapid diffusion of local land banking systems since the late 1990s. Land banking refers to the process in which local governments purchase land from previous users, convert it to productive use, or hold it until it is profitable to sell (Alexander, 2008). By taking local governments as the basic unit of analysis, I explore the institutional constraints that local governments face when they make reform decisions and analyze how various institutional forces have shaped the trajectory of the reform. I use an empirical study to examine how these forces interact and are moderated by other factors, such as complex intergovernmental resource dependence relations.

Understanding these questions is important because existing studies have unanimously taken the rationalist approach and attributed the causes of the diffusion to economic development, urbanization, or industrialization (Ho & Lin, 2003; Tan & Peng, 2003). This approach depicts local governments as fully rational actors who are free to choose local policies. It neglects the institutional context in which such choices are made, and also overlooks the importance of institutional forces that have been identified as important mechanisms for diffusion (DiMaggio & Powell, 1983; Meyer & Rowan, 1977). This omission reveals an important gap in the existing literature on organization diffusion in China; that is, previous studies taking the neoinstitutionalist approach have focused overwhelmingly on business organizations. Our knowledge is still very limited about how diffusion proceeds in the state administrative system and what role institutional forces play during China's administrative reform (Bjorkman, 2003; Firth, 1996; Guthrie, 1999; Keister, 2002). Answers to these questions will contribute to our understanding of institutional forces: whether, how, when, to what extent, and in what ways they affect reform (Dobbin, Simmons, & Garrett, 2007; Peng, 2003). These questions correspond to the more difficult and intriguing questions found in the study of transitional economies (Peng, 2003).

In this article I examine the institutional conditions under which land banking agencies were founded, and the forces and mechanisms that have facilitated the diffusion process. I first summarize the background of the land banking system and then propose research hypotheses based on a review of neoinstitutional and diffusion theories. Next I provide a statistical analysis of the diffusion mechanisms and conclude with major findings and implications.

The Development of China's Land Banking System

The marketization of China's land-use rights began when the 1988 Amendments to the Constitution separated land-use rights from land ownership and allowed the rights to be transferred commercially (Chan, 1997; Xie et al., 2002). Two years later the State Council approved the *State Owned Land-Use Rights Transaction and Transfer Regulation*, which confirmed the commodity nature of land-use rights,

established the new land management regime, and gave governments at or above county level the power to manage land transaction and transfer applications.

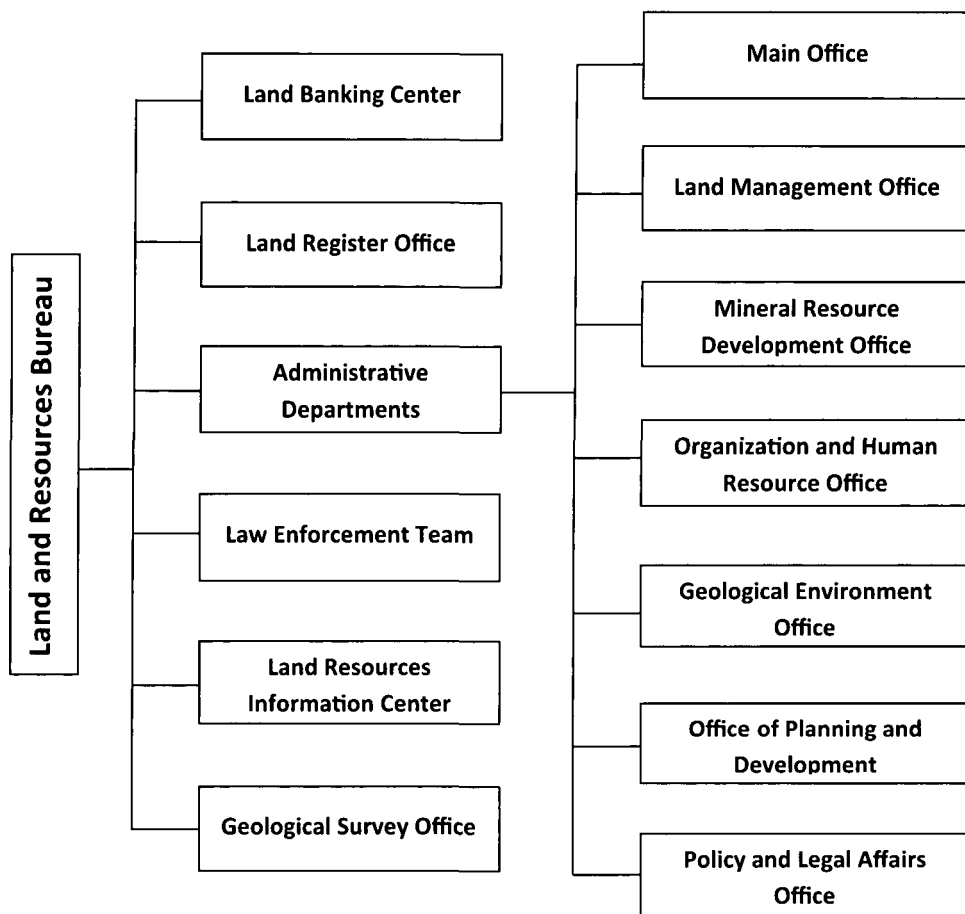
However, in the early 1990s a dual track system still dominated land-use rights transactions; administrative allocations and paid conveyances were the two basic ways to acquire land-use rights (He & Zhang, 2000; Ho & Lin, 2003). During the 1990s, 70 percent of state-owned land was administratively allocated. Of the conveyances, 89 percent was by negotiations and only 11 percent (or 3 percent of total land in the market) was through auctions and tenders (Ho & Lin, 2003). The duality of the land market caused two negative consequences. First, black land markets emerged in which *de facto* landowners (usually bankrupt SOEs) sold their allocated land during the SOE restructuring process. Second, local officials gained opportunities to further personal interests by abusing management power. As many studies have documented, this dual-track land management system was a major cause of loss of state-owned assets and became a hotbed of corruption (Chan, 1997; Development Research Center, 2005; Ho & Lin, 2003).

This chaotic situation triggered concern in the central government. The State Council mandated that local governments should take effective measures to strengthen land management. In fact, several developed cities had already perceived the need to find new institutions to mobilize land revenue to finance local projects. Cities such as Dalian, Shanghai, Hangzhou, and Qingdao began to experiment with the land banking system based on the lessons learned from land banking practices in the United States and Hong Kong (Alexander, 2008; Chan, 1997; Yang, Gao, Tao, & Li, 2005).

The U.S. uses land banking as a policy tool to address the problem of vacant and abandoned properties. Land banking programs become depository institutions for surplus land. These programs also contribute to stabilizing the real estate market when supply suddenly exceeds demand by temporarily reducing the supply and returning it to the market only when private demand returns (Alexander, 2008). Hong Kong has established a land banking system as a method for generating fiscal revenue and encouraging efficient land use. Hong Kong's land banking system is similar to China's: in both systems land belongs to the government; only land-use rights are sold for a given period to land users through public auction and tender. These transactions bring the Hong Kong government a sizeable amount of nontax revenue. In 1994 land sales generated US\$2.4 billion for the government, which accounted for 11 percent of its total revenue. These funds were then used to finance various infrastructure programs or other public projects (Chan, 1997).

Because the *Land Management Law* designates prefecture cities, county-level cities, and counties as the major levels that administer land requisitions and land conversions, land banking agencies are usually established at these levels. These agencies represent local governments in purchasing, preparing, and selling urban construction land. They can also increase their land reserves by converting rural farmland into urban construction land according to the local land-use plan. The

Figure 1. The structural position of a land banking centre in a local land and resources bureau



Note: Data from Xi'an Land and Resources Bureau Website (<http://www.xaland.gov.cn>). To simplify the chart, not all administrative departments are listed.

agencies usually transform the acquired land into mature land by connecting electricity, water, gas, and communication lines, and building the necessary transportation infrastructures. They then sell the land to the highest bidders through market means such as tender, auction, or public listing.

Chinese land banking agencies usually affiliate with local land management authorities (see Fig. 1). In most places the land banking agencies are registered as public service units. Although in a few cases (e.g., Shanghai and Chongqing) the agencies take the form of state-owned enterprises, these enterprise-like agencies still represent the local state in exercising land banking authority; they receive fiscal funds from the local governments and are therefore not *de facto* business entities operating independently from the local states.

The allocation of land revenue is highly decentralized. According to statistics compiled by the Ministry of Finance (MOF), prefecture-level and county-level

governments are the main recipients of revenue; more than 70 percent of revenue flows to these two levels. On the expenditure side, these two levels manage 90 percent of the total expenditure. These funds are mainly used for urban land development and infrastructure projects (about 80 percent), and only a small share (less than 20 percent) is used for land reclamation projects that aim to compensate farmland loss (MOF, 2005). Clearly land sales revenue has become an important fiscal source for urban infrastructure development.

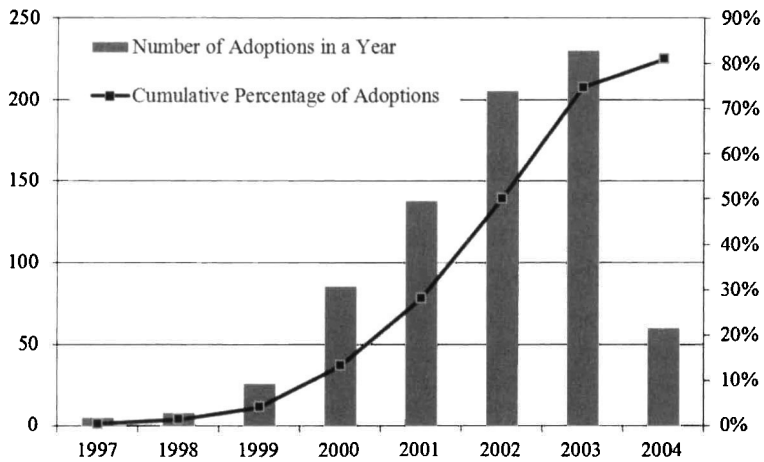
The new system brings considerable efficiency gains. It enables local governments to regain control over a large share of land conveyance profits that was formerly possessed by illegal land traders and corrupt officials. Moreover, this system enables local governments to enjoy the benefits of land value appreciation driven by China's rapid industrialization and urbanization process. According to the Ministry of Land and Resources (MOLR), the revenue generated from land sales increased from 35 billion yuan in 2000 to 1.5 trillion yuan in 2009, which accounts for 4.4 percent of the nation's GDP (MOLR, 2001, 2009). In addition, land banking agencies are often closely related to other quasi-public firms, such as urban infrastructure investment companies and urban transportation investment companies. Local governments often instruct the land banking agencies to serve as guarantors for investment firms applying for bank loans.

The central government views this new system as better than the old administrative allocation system for land management. In 1999 the MOLR issued internal reference materials promoting the land banking experiences of Hangzhou and Qingdao. Two years later the State Council issued a circular encouraging local governments to establish the system if they deemed it appropriate (State Council, 2001). In addition, provincial governments also stipulated provincial land banking regulations. These efforts facilitated the dissemination of land banking practice: From 1996 to 2003 the number of local land banking agencies grew from 0 to 1,600 (Yang et al., 2005); in other words, more than half of the cities and counties adopted this new institution in less than a decade (see Fig. 2).

After more than 10 years of practice, the central government eventually accepted this new system as part of the national land management institution. In 2007 the MOLR, the MOF, and the People's Bank of China jointly issued the *Regulation on Land Banking Systems*, which formally acknowledged the legal status of the land banking systems.

However, outside the bureaucratic system, the public frequently questions land banking practices, and critics have delineated the many negative consequences. First, the pursuit of short-term fiscal gains endangers the effects of long-term national policies. As income from land transactions becomes a major revenue source for local public finance, local states are encouraged to expand the scale of local land development and convert rural farmland to urban construction land. This massive conversion greatly undermines the nation's efforts to protect cultivatable land (Cartier, 2001). Second, current land conversion regulations cannot

Figure 2. The adoption of land banking agencies in sampled provinces



effectively protect the welfare of landholders. The compensation paid to landholders, especially the farmers, is often significantly less than the land's market value, which causes landholders considerable economic loss (World Bank, 2004).

Third, increasing land prices promotes the overall increase of urban housing prices. Most urban housing projects are now required to acquire land through commercial means (e.g., bidding and public auction), which greatly improves the land's market price. The increased land acquisition costs are eventually reflected in rising housing prices that have become a huge financial burden for consumers, including most urban residents (Lu, 2008). Finally, although control of urban land enables the local state to acquire considerable bank loans, it also increases financial risks for local states and banks (Development Research Center, 2005). The MOLR data show that by the end of 2009, 2.58 trillion yuan land mortgage loans had been issued in just 84 major Chinese cities (MOLR, 2009). This number would be substantially higher had all county-level and above units been included.

The support from local states and the public concerns are two major forces that dominate the future of the land banking system. Despite its many flaws, completely abandoning the new system is still unlikely. More practical is to gradually improve the land banking system and its associated institutions. For example, the MOLR is working on amending the *Land Management Law*, which will prevent local land banking agencies from building their stock of land by converting farmland into urban construction land (*Sina Finance*, 2010). Moreover, new legislation has been proposed to clarify and secure the rights of landholders, and ensure fair treatment and adequate compensation for land acquisition (Development Research Center, 2005). In addition, major cities have undertaken local property tax reforms to gain a sustainable alternative revenue source and reduce their overreliance on the revenue from one-time land sales (Xinhua Net, 2011). However, we have yet to observe the effects of these remedies.

THEORETICAL BACKGROUND AND HYPOTHESES

Researchers frequently choose one of two competing theoretical approaches to explain organizational diffusion: rationalism and neoinstitutionalism (Tolbert & Zucker, 1983). Rationalist arguments state that the need for efficiency or effectiveness drives organizations to adopt new structures that can reduce transaction costs or help them attain effectiveness objectives (Blau & Schoenherr, 1971; North, 1990; Williamson, 1985). Neoinstitutional arguments posit that organizations may adopt new department and operating procedures to prove their legitimacy, to cope with environmental uncertainties by modelling others, to conform to the will of other organizations the adopters depend on, or to respond to persuasive cultural accounts (DiMaggio & Powell, 1983, 1991; Dobbin et al., 2007; Knoke, 1982; Meyer & Rowan, 1977; Strang & Meyer, 1993). These two approaches are often used to explain the diffusion of business practices and innovations among Chinese firms (Guthrie, 1999; Keister, 2002; Li, Chen, & Shapiro, 2010; Li, Guo, Yi, & Liu, 2010). In this study, I combine and compare these two approaches in the study of organization diffusion within the political system.

The Rationalist Argument

Those who hold the rationalist view argue that rational calculations inspire institutional innovations and the diffusion of innovative practices (North, 1990; Williamson, 1985). Scholars presume that social, political, and economic characteristics influence countries or states to adopt new programs or policies (Berry & Berry, 2007). That is, when state policy makers craft policies, they respond to internal characteristics of their local environment, such as market needs and local residents' demands (Daley & Garand, 2005).

Since the early 1980s China's once highly centralized social and economic management system has gradually yielded to a decentralized management system in which local governments have more discretion over local policy making (Walder, 2011). This transformation makes it possible for local governments and SOEs to explore new institutions and organizational forms that fit their needs. Meanwhile, fiscal decentralization and various enterprises' profit retention schemes create material incentives (Oi, 1992) as well as hard budget constraints (Walder, 1995) for local cadres and SOE managers, and force them to be more entrepreneurial in choosing appropriate development strategies in this highly uncertain environment (Montinola, Qian, & Weingast, 1995).

When the land banking system was introduced in China, it was viewed as an efficient land management model that reduces transaction costs originating from the distorted price-setting mechanism, slack transaction supervision, and the scarcity of land supply information. The system terminated administrative allocations and negotiations as the major methods of commercial land distribution. Market

mechanisms such as tender, auctions, and listings were stipulated as the proper means for commercial land transactions.

Economically advanced cities seem more willing to welcome such a system because rapid industrialization and urbanization require large-scale land conversions, and economic growth and rising living standards boost the development of the local real estate market. The new system allows local states to more efficiently manage land conversions and transactions, and also extract tremendous land-related fees and taxes (Ding, 2003; Yang et al., 2005; Zhang, 2000). It is therefore plausible to expect:

Hypothesis 1: *The economic characteristics of a city or county (e.g., per capita GDP, industrialization ratio, and urbanization ratio) will be associated positively with the adoption rate of the land banking system (i.e., the probability a city will adopt the system in a given year).*

The Neoinstitutional Argument

In contrast to the rationalists, neoinstitutional theorists offer an alternative explanation for organization diffusion. They suggest that, rather than efficiency considerations, power relations, competition, and legitimization can inspire the adoption of isomorphic organization structures (DiMaggio & Powell, 1983; Hannan & Freeman, 1977; Meyer & Rowan, 1977). They argue that coercive, mimetic, normative, and cognitive forces can promote the spread of particular organization forms (DiMaggio & Powell, 1991; Dobbin et al., 2007; Peng, 2003; Wejnert, 2002). Their argument differs from efficiency arguments in that the pursuit of political power, institutional legitimacy, and social fitness occupies the central position of analyses (DiMaggio & Powell, 1983; Hannan & Freeman, 1977).

Coercive isomorphism and resource dependence. Neoinstitutional theorists have long believed that state or key organizations can exert coercive pressure to force the adoption of new practices (DiMaggio & Powell, 1983; Dobbin et al., 2007; Meyer & Rowan, 1977); thus they focus on regulative effects of state-sanctioned formal rule systems and enforcement mechanisms (North, 1990; Peng, 2003; Scott, 1995). As an important base of legitimacy, coercive pressure can originate from the established legal framework or from resource-dependence relations between organizations that control resources (Blau, 1964; DiMaggio & Powell, 1983; Emerson, 1962; Mizruchi & Fein, 1999; Pfeffer & Salancik, 1978). By incorporating resource-dependence arguments, neoinstitutional theorists have further argued that interorganizational resource-dependence relations condition the effectiveness of coercive power (DiMaggio & Powell, 1983; Mizruchi & Fein, 1999; Oliver, 1991; Peng, 2003). Focal organizations that depend heavily on organizations exerting pressure tend to respond more strongly to demands. Similarly, organizations will

more likely resist external pressure when they are less dependent (DiMaggio & Powell, 1983; Oliver, 1991; Pfeffer & Salancik, 1978).

Past studies on policy diffusion emphasize the importance of financial resources and political resources for innovation (Berry & Berry, 2007). Scholars have argued that the availability of financial resources is a prerequisite for many policy innovations because new policy programs often require additional fiscal expenditures. Therefore, the fiscal health of a local state is often positively related to its propensity to innovate (Hwang & Gray, 1991). In addition, political status is also crucial for institutional changes because high political status is often associated with high governance capacity, which is a prerequisite for policy innovation (Berry & Berry, 2007; Daley & Garand, 2005). In light of these findings, I looked closely at two basic forms of intergovernmental resource dependence relationships – fiscal dependency and political affiliations – as they condition the effectiveness of coercive orders from higher-level governments.

Fiscal dependence. China's current tax sharing system (TSS), established in 1994, shapes intergovernmental fiscal relations. This system centralizes fiscal revenue and maintains the decentralized expenditure structures (Wong, 2000). In many places, local revenue alone is insufficient for fulfilling local states' expenditure responsibilities (Bahl, 1999; Wong, 2000; Zhao & Zhang, 1999). Various intergovernmental transfer payments meet such fiscal gaps, whether they are general-purpose or earmarked transfers. Local governments can use general-purpose transfers at their discretion. In contrast, the central government uses earmarked transfers to finance projects such as the Rural Fee Reform that, for example, increases salaries for public servants and improves enrolment in compulsory education. These transfers constitute a significant proportion of local expenditure and are particularly important to inland governments that lack sound tax bases.

Under such a system, higher-level government usually has a greater say regarding the sharing rule with its subordinates in terms of tax revenue and transfers. For those who depend heavily on transfers from above, the incentives for compliance and disincentives for resistance are obvious (Wong, 2000). We can therefore expect that when higher-level governments demand no adoption requirements, fiscally weak cities will postpone the adoption because larger transfer or fiscal dependency usually indicates poor economic conditions. However, when adoption is mandatory, cities that depend heavily on transfers are more likely to adopt the system. It can thus be expected that:

Hypothesis 2 (*independent effect*): *Fiscal dependence will be negatively associated with adoption rates of land banking systems.*

Hypothesis 3 (*interaction effect*): *Fiscal dependence will be more positively associated with adoption rates of land banking systems when provincial pressure is higher.*

Political dependence. Many studies have found that an organization's status, political or economic, is an important predictor of adoption (Wejnert, 2002). Higher-status organizations usually adopt a new form first, then may require lower-status organizations to follow (Guthrie, 1999; Palmer, Jennings, & Zhou, 1993; Wejnert, 2002). I argue that besides fiscal resources, political status is a crucial resource for institutional change. Lower-level governments depend on higher-level governments not only for fiscal resources but also for political approval to implement local reform plans.

China's hierarchical administrative system leads to political dependency relations among the units, which are divided into six political statuses: independent planning cities (*jihua danlieshi*, 计划单列市), semi-provincial cities, prefecture cities, county-level cities, counties, and urban districts under prefecture. Higher political status means greater socioeconomic management power and the greater likelihood that the city's leadership will enjoy higher political rank and stronger ability to engineer local policies (Chan, 1997; Wong, Heady & Woo, 1995). For example, in terms of economic management power, independent planning cities are treated as being equal to provincial units; they report directly to the central government, can approve projects with large investments, and remit revenue directly to the MOF. The central government even gives them special quotas in certain socioeconomic affairs such as birth quotas (Chan, 1997; Wong, Heady, & Woo, 1995).

High-status cities usually have more autonomy in formulating local socioeconomic policies. When the prospect and the effectiveness of a new system are still uncertain, higher-status cities can decide to adopt the system without suffering too many political constraints. However, when they feel that the higher-level governments are advocating a reform plan that does not fit their situation, they are more likely to bargain with provincial governments to postpone or even suspend the reform in their jurisdiction. Given their high political and economic status, their opinions carry more weight with their superiors than the opinions of lower-status cities. It can thus be expected that:

Hypothesis 4 (*independent effect*): *Political dependence will be positively associated with the adoption rates of land banking systems.*

Hypothesis 5 (*interaction effect*): *Political dependence will be more negatively associated with adoption rates of land banking systems when provincial pressure is higher.*

Mimetic isomorphism and structural equivalence: Peer pressure. When organizations are situated in uncertain environments, they tend to imitate the practices of similar organizations that they perceive as successful (DiMaggio & Powell, 1983; Haunschild & Miner, 1997) because imitation strategies can help them reduce innovation risks and lower search costs (DiMaggio & Powell, 1983). Imitation can also

occur through an unconscious form of influence in which practices that are frequently adopted become increasingly 'taken for granted' and automatically adopted (Haunschild & Miner, 1997). When the outcomes of practices are uncertain, then the trait-based imitation processes become salient (Haunschild & Miner, 1997).

To study the trait-based imitation process, some researchers have used the idea of structural equivalence in which two firms occupy the same social position and have the same relation with other firms in the system. Researchers have predicted that firms will quickly adopt innovations that seem to make others successful (Abbott & DeViney, 1992; Aldrich, 1979; Burt, 1987; Davis, 1991; Galaskiewicz & Burt, 1991; Guler, Guillen, & Macpherson, 2002).

The structural equivalence argument captures isomorphic pressure from peers in the organization population. Structural equivalence differs from coercive isomorphism, which focuses on the pressure originating from unbalanced power relations. As Burt argued, organizations can ignore the diffusion among organizations of higher or lower status because it does not directly relate to their evaluation of adoption (Burt, 1987; Galaskiewicz & Burt, 1991). However, organizations compare themselves with others in the same structural positions and fear that the others will replace, marginalize, or even remove them from the structure (Burt, 1987). Thus, subtle psychological pressures from their social reference group lead them to adopt an innovation (Han, 1994).

China's administrative system is rich in structural equivalence relations. This system is analogous to a nested hierarchical structure in which multiple same-level units are affiliated with a common higher-level unit. Lower- and higher-level units can be tied through economic planning, fiscal or political, and lower-level units share similar status and structural positions (Guthrie, 2005; Walder, 1995). Units are thus structurally equivalent if they are at the same level and affiliated with the same superior unit.

Competitive relations among structurally equivalent cities can also influence the imitation process. Some cities may quickly imitate new practices that others have adopted because they fear the new practices will advance their competitors, even when the real effects are still uncertain (Krug & Hendrichske, 2008). Interurban competition can be both political and economic. Politically speaking, same-level units are subject to similar evaluation standards, which higher-level officials use to evaluate the performance of lower-level leaders. Under this system local leaders at the same level compete for rewards such as tenure, remuneration, and advancement opportunities (Li & Zhou, 2005; Whiting, 2001).

Economically speaking, China's decentralized economic management structure gives local governments considerable autonomy in engineering local development strategies. This federalist structure gives rise to interurban competition over capital and labour (Dougherty & McGuckin, 2008; Krug & Hendrichske, 2008). Cities are induced to create a hospitable investment environment by providing better infra-

structure, utility, greater security for factory owners, and fair access to resources and markets (Harvey, 2005; Montinola et al., 1995; Zheng, 2007). Local states are forced to imitate 'good practices' to maintain their competitiveness (Dougherty & McGuckin, 2008; Krug & Hendrischke, 2008). In light of these features, it can be expected that:

Hypothesis 6: *Peer pressure on land banking system adoptions will be positively associated with a city's or county's adoption rate.*

Normative isomorphism and expert theorization. In addition to the coercive and mimetic processes, neoinstitutionalists have argued that normative forces stemming primarily from professionalization can drive isomorphic organizational change. They conceptualize professionalization as the collective struggle of members of an occupation to define the conditions and proper methods of their work (DiMaggio & Powell, 1983). Expert theorization is an example of such processes (Strang & Meyer, 1993; Wejnert, 2002). Dobbin et al. (2007) argued that expert theorization occurs when epistemic communities of policy experts theorize a new policy solution for a particular policy issue. Experts have advocated new policy norms that are often built on the experiences of early adopters, which later lead to isomorphism even when a given group offers no particular examples.

Previous studies have focused on the theorization efforts of well-organized professional associations in the form of complex organizations. Recent studies have shown that in addition to professional associations, loosely defined professional social movement communities can also accomplish theorization (Haveman, Rao, & Paruchuri, 2007). Regarding the land banking case, the first national association for local land banking professionals was established in late 2005 when most local states had already adopted land banking policies. Therefore professional associations played a minimal role in the diffusion process. In the absence of a well-defined professional organization, loosely defined epistemic communities consisting of policy analysts and local officials mainly accomplished the theorization of land banking practices.

Policy analysts usually introduce the idea of land banking to policy makers, and articulate the institutional conditions under which this new system could take effect. Based on the comparison of land banking experiences in different locations, the policy analysts specify the advantages and limitations of these new land management practices. In addition to policy analysts, some local officials also play an important role in the theorization process because they usually accumulate abundant knowledge about establishing and operating the new system in a given locality (Yang et al., 2005).

These work experiences and expert knowledge eventually promote professionalization of land banking practice. The advantages and working mechanisms of the land banking systems are gradually theorized and spread within the policy-making

communities, and eventually land banking becomes a normative solution for urban land management. Therefore, it can be hypothesized that:

Hypothesis 7: *The intensity of expert theorization will be positively associated with a city's or county's adoption rate of land banking systems.*

METHOD

Data

I tested the hypotheses by using a compiled panel dataset on adoption of land banking systems in cities and counties in 12 provinces between 1997 and 2004. The data were compiled from multiple sources. Data on the timing of adoption were drawn from several secondary sources and were collected during 2007 and 2008. The primary data sources were business and public units registration records and official land banking documents from the Chinese local law information database. To supplement and cross-validate the adoption information, I also drew data from other sources such as the China economic news dataset provided by China Info Bank Corporation, local newspapers, and government websites.

I then merged the adoption data with other data sources that were used to construct independent variables, including (i) local macroeconomic information from the China Data Online database, which provides longitudinal socioeconomic data on cities (prefecture- and county-level cities) and counties; (ii) newspaper articles related to land banking from the China Full-text Newspaper Database; and (iii) provincial land banking legislation information from the China local law information database. These data were retrieved in 2008. Although they were compiled from different sources, I relied on the same database for each type of data (e.g., quantitative data from local economic features, and qualitative data from newspaper articles or official documents) to maintain internal consistency.

The unit of analysis was city-year/county-year. Cities and counties were a natural choice for this study because the land banking systems are typically established at these levels. An ideal sample would include all city- and county-level units across the nation, but adoption data were unavailable for every local unit because local governments vary greatly in their information disclosure policies. Hence, the sample included only 12 provinces and their subordinate cities and counties, based on two considerations: first, to account for the heterogeneous social and economic conditions between eastern and western China, the sample should contain a comparable number of units from each region. Second, to investigate the peer influence effect and obtain reliable model estimations, the attrition rates in the included provinces should be maintained at a low level. As a result, the final sample included six provinces from eastern regions and six from western regions; the boundary between these two regions is defined by the national 'western development policy'. In addition, in all 12 selected provinces the attrition rates were less than 18 percent.

Measures

Dependent variable: Adoption year. A complete local land banking institution includes a functional land banking agency and a binding local land banking regulation. In some cities these two institutional elements emerge together; in many other cities land banking agencies are founded prior to the passage of land banking regulations, or even work without a binding regulation. Because the *de facto* influences of land banking institutions on local land transactions are realized through land banking agencies, I determined the adoption of the land banking system by using the time when local land banking agencies were established. The adoption time was treated as missing when no data identified the adoption time, or when the case was left-censored (i.e., evidence showed active land transactions through tendering, auction, and public listing measures between 1997 and 2004 while the exact adoption time could not be identified). In addition, the cases that adopted the system after 2004 were marked as right-censored. Analyses showed that the probability of missing was random and was not significantly correlated with the covariates; therefore they were less likely to bias estimations. From 1997 to 2004, more than 80 percent of local governments in the sampled provinces adopted this system, suggesting that the data captured a major part of the diffusion process.

Independent variables. I used three variables to measure the condition of local economic development. *Per capita GDP* refers to the annual *per capita* gross domestic product that was produced in a given city or county, calculated by dividing the total local GDP in a given year by the year-end local population. *Industrialization Ratio* refers to the ratio of the local secondary industry GDP to the total local GDP. *Urbanization Ratio* refers to the ratio of urban population to the total population of a city or a county. The information used in constructing these variables came from the China Data Online database.

Provincial pressure. This variable indicated how forcefully a province promoted the land banking system among affiliated cities and counties. Based on the clarity of the clause and the validity of the documents, this variable was coded into six values: the lowest value refers to the situation in which a province only vaguely mentioned the land banking concept in official documents; the highest value indicates that a province passed specific regulations based on the province's land resource endowment and economic conditions. Three policy experts graded the importance of each policy, and the mean value was adopted. The official documents come from the China Law Information Database. For each province this variable changed its value over time to capture the temporal changes of provincial pressure.

Fiscal dependence. Data on revenues and expenditures came from the China Data Online database. The fiscal dependence variable measured a particular local government's dependence on its superiors for fiscal resources, and was calculated

by using the equation below, where TD_{ij} refers to the transfer dependency of city i in year j ; and EXP_{ij} and REV_{ij} refer to the budgetary expenditure and budgetary revenue of city i in year j :

$$TD_{ij} = (EXP_{ij} - REV_{ij}) / EXP_{ij}. \quad (1)$$

Political dependence. This variable indicated the political status of a city in the hierarchical system. I treated this variable as an ordinal variable, assigning highest value to the independent planning cities and lowest value to urban districts. The 922 local units included three independent planning cities, 7 semi-provincial cities, 131 prefecture level cities, 155 county-level cities, 618 counties, and 7 urban districts. The information used for constructing this variable came from the China Data Online database.

Peer pressure. Peer pressure was conceptualized as the cumulative frequency of adoptions within a trait-based social group (Haunschild & Miner, 1997). It was measured as the year-end cumulative number of adopters divided by the total number of units in the same peer group (Fligstein, 1985). Three peer groups are constructed within each province according to the city's political status, namely cities at or above prefecture level, cities at county level, and counties and below. This variable was calculated by using the following equation, where PP_{ij} refers to peer pressure in peer group i in year j ; n_{it} refers to the number of adopters in peer group i in year t ; and N_i refers to the total number of cities (or counties) in peer group i :

$$PP_{ij} = \sum_{t=1997}^j n_{it} / N_i. \quad (2)$$

Expert theorization. I conceptualized normative pressure as the experts' efforts in theorizing a new practice (Strang & Meyer, 1993). This concept was operationalized as the number of expert articles on land banking practices that appeared in provincial official newspapers (e.g., *Liaoning Daily*) in a given year. These newspapers are affiliated with provincial propaganda departments, and the articles published represent the latest advances in local policy-making circles. The substantive content of a land banking-related article determined whether it should be regarded as part of the theorization process. Included in the final count were articles that discussed land banking theories, compared land banking practices in different places, and described local land banking practices. I excluded articles that announced only the founding of a land banking system in a given city or county because they generally contained no information that could be used to theorize or legitimize the land banking practice.

Control variables. I included several control variables to account for the effects of other socioeconomic factors. *Per Capita FDI* refers to the actual utilized foreign direct investment made in a city divided by the year-end population of the same

area. It was used to account for the effects of foreign direct investments on the adoption of a land banking system. *Population Density* was included to control for the degree of land scarcity in a given city or county. It was equal to the number of people in a given city or county divided by the land area of the same region. *Per Capita Cultivable Land* refers to the area of cultivatable land divided by the number of people living in the same geographic location. I included it to control for the availability of potential land resources that could be converted to construction land. *Per Capita Real Estate Investment* refers to annual *per capita* fixed assets investments in a real estate sector within a city or a county. It was used to account for the effects of newly increased investments on the adoption of a land banking system. Finally, the *Annual Wage and Salary* of local workers and staff was used as a proxy for urban residents' purchasing power. The data used to construct these variables came from the China Data Online database. Table I presents the descriptive statistics and correlations of these covariates.

Analyses

The event history model was used to evaluate the effects of the above independent variables on the adoption of the land banking system. This method is commonly used to analyze the relationship of survival distribution to covariates (Fox, 2002; Tolbert & Zucker, 1983). Specifically, I chose Cox's proportional-hazard model because it allows researchers to estimate the effects of parameters without specifying the hazard function. The general form of this model is

$$h_i(t) = h_0(t) \exp(\beta_1 x_{i1} + \beta_2 x_{i2} + \dots + \beta_{k1} x_{ik}), \quad (3)$$

where $h_i(t)$ is the hazard function of observation i , $h_0(t)$ is the unspecified baseline hazard function, and β s are the regression coefficients of independent variables. The coefficient is interpreted as the multiplicative effects on the hazard, which means a unit increase of covariate x_j will cause $\exp(\beta_j)$ change of the hazard, holding other covariates constant (Fox, 2002).

The Cox regression model can also accommodate time-varying covariates such as per capita GDP and peer pressure. The model treats each time period for an individual case as a separate observation, in other words, a separate row in the data set (Fox, 2002). Observations with time-varying covariates are transformed into multiple observations.

After fitting each model, I performed a proportional-hazards assumption test on the basis of Schoenfeld residuals. The tests showed that the assumption held for all models. Moreover, parameters were calculated from partial maximum likelihood estimation, and the Huber-White method was applied to obtain standard errors. Compared with other methods, the Huber-White method yields more robust and consistent standard errors even when heteroskedasticity potentially affects the estimations.

Table 1. Means, SDs, and bivariate correlations

Variable	Mean	SD	Bivariate correlations															
			1	2	3	4	5	6	7	8	9	10	11	12	13	14		
1 Per Capita GDP (1000 yuan)	5.39	4.05																
2 Industrialization ratio	0.36	0.14	0.60															
3 Urbanization ratio	0.16	0.12	0.37	0.33														
4 Fiscal dependence	0.50	0.27	-0.36	-0.36	-0.17													
5 Political dependence	2.40	0.74	0.38	0.26	0.46	-0.31												
6 Provincial pressure	1.68	2.16	0.09	0.00	-0.05	0.32	-0.10											
7 Provincial pressure × Fiscal dependence	1.02	1.50	-0.04	-0.09	-0.07	0.60	-0.17	0.87										
8 Provincial pressure × Political dependence	3.88	5.27	0.16	0.05	0.05	0.24	0.09	0.94	0.54									
9 Peer pressure	0.11	0.22	0.20	0.11	0.02	0.24	0.10	0.56	0.60	0.47								
10 Expert theorization	2.29	4.61	0.14	0.07	-0.07	0.20	-0.06	0.56	0.53	-0.03	0.46							
11 Per capita FDI (USD)	0.09	1.72	0.14	0.05	0.02	-0.08	0.04	0.00	0.00	-0.13	-0.01	-0.01						
12 Population density (1000 person/sq. km)	0.38	0.44	0.34	0.29	0.23	-0.34	0.52	-0.05	0.03	0.05	0.08	0.00	0.12					
13 Per capita cultivatable land (mu)	0.08	0.05	-0.12	0.01	0.21	0.15	0.00	0.01	0.02	-0.04	-0.02	-0.02	0.00	-0.12				
14 Per capita real estate investment (1000 yuan)	0.02	0.04	0.45	0.24	0.29	-0.20	0.55	0.05	0.17	0.35	0.23	0.05	0.08	0.53	-0.11			
15 Annual wage and salary (1000 yuan)	8.11	2.66	0.21	-0.01	-0.03	0.22	0.06	0.41	0.40	0.77	0.41	0.30	0.02	-0.05	-0.16	0.28		

RESULTS

The event history models presented in Table 2 provide the results on the tests of the seven hypotheses. Model 1 tests the rationalist explanation (Hypothesis 1). Only city economic characteristics and control variables are included in this model. The results show that the coefficients of *per capita* GDP, industrialization ratio, and urbanization ratio are positive and statistically significant, suggesting that rationalist arguments are valid when no institutional forces are introduced. To be specific, a 1,000 yuan increase in *per capita* GDP raises the adoption rate by 23 percent ($\exp(0.21)-1$) on average, holding other covariates constant. Every percentage increase of the industrialization ratio leads to 5.2 percent growth in the adoption rate, and every percentage increase of urbanization ratio enlarges the adoption rate by 0.5 percent. Among the control variables, the coefficient of population density and the coefficient of *per capita* real estate investment are positive and significant, indicating positive relations between land scarcity, local investments, and the adoption rate.

To handle time-varying covariates, I included interaction terms with time. The interpretations of these interaction terms are simple. Negative and significant coefficients for the interactions between *per capita* GDP and time and between industrialization ratio and time suggested that their effects decline over time. In other words, *per capita* GDP and industrialization ratio initially affect adoption rates positively, but the effects gradually diminish. These results supported Hypothesis 1 and suggested that a strong economy and a growing industrial sector can lead to higher adoption rates, but the effects of these two factors decrease over time.

Models 2 to 4 examine the effect of provincial pressure and the moderating effects of resource dependence relations (Hypotheses 2–5). Model 2 includes transfer dependency as the proxy of intergovernmental fiscal resource dependence relations. The negative and significant coefficient showed that when provincial pressure is absent, a 1 percent increase in the transfer dependency reduced the adoption rate by 1 percent, thus supporting Hypothesis 2. Model 2 further explores the relation between political status and the adoption rate. The results showed a positive and significant relationship; the adoption rate grew by 37 percent on average for every 1 unit increase in political status suggesting that when provincial pressure is absent, cities with higher political status tend to have higher adoption rates. Hypothesis 4 was thus supported.

However, when lower-level governments depend fiscally on provincial governments to promote adoption, high fiscal dependency ratios can reinforce the positive effects of coercive forces on adoption rates (as stated in Hypothesis 3). Model 3 supports this idea; it incorporates covariates representing fiscal resource dependency, provincial pressure, and their interaction term. As expected, provincial pressure positively affects the dependent variable. Beside the main effects, the coefficient for the interaction effect between provincial pressure and the transfer

Table 2. Cox proportional hazard models for hypotheses tests

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7	
	β	SE	β	SE	β	SE	β	SE	β	SE	β	SE	β	SE
Independent variables														
<i>Per capita</i> GDP (H1)	0.21	(0.03)***	0.19	(0.03)***	0.11	(0.03)***	0.11	(0.03)***	0.15	(0.03)***	0.16	(0.03)***	0.10	(0.04)**
Industrialization ratio (H1)	0.05	(0.01)**	0.05	(0.01)***	0.05	(0.01)***	0.05	(0.01)***	0.03	(0.01)**	0.05	(0.01)***	0.03	(0.01)*
Urbanization ratio (H1)	0.01	(0.00)*	0.01	(0.01)	0.01	(0.01)	0.01	(0.01)	0.01	(0.01)	0.01	(0.00)**	0.01	(0.01)
Fiscal dependence (H2)	-	-	-0.01	(0.00)***	-0.01	(0.00)***	-0.01	(0.00)***	-	-	-	-	-0.01	(0.01)**
Political dependence (H4)	-	-	0.32	(0.05)***	0.32	(0.05)***	0.50	(0.08)***	-	-	-	-	0.26	(0.11)*
Provincial pressure (H3 & H5)	-	-	-	-	0.31	(0.13)**	0.51	(0.16)***	-	-	-	-	0.34	(0.17*)
Prov. pressure \times fiscal dep. (H3)	-	-	-	-	0.01	(0.00)**	-	-	-	-	-	-	0.01	(0.01)
Prov. pressure \times Pol. dep. (H5)	-	-	-	-	-	-	-0.05	(0.02)**	-	-	-	-	-0.07	(0.02)**
Peer pressure (H6)	-	-	-	-	-	-	-	-	0.06	(0.01)***	-	-	0.06	(0.01)***
Expert theorization (H7)	-	-	-	-	-	-	-	-	-	-	0.02	(0.01)***	0.05	(0.02)**
Control variables														
<i>Per capita</i> FDI (USD)	-0.01	(0.01)	-0.01	(0.01)	-0.01	(0.01)	-0.01	(0.01)	0.02	(0.00)***	-0.01	(0.01)	0.02	(0.00)***
Population density	0.48	(0.08)***	0.31	(0.07)***	0.29	(0.07)***	0.27	(0.07)***	0.07	(0.07)	0.47	(0.08)***	0.05	(0.08)
<i>Per capita</i> cultivatable land	-0.96	(0.69)	-0.54	(0.68)	-0.51	(0.67)	-0.57	(0.67)	-0.47	(0.60)	-1.06	(0.71)	0.12	(0.60)
<i>Per capita</i> real estate investment	1.63	(0.61)**	0.01	(0.72)	-0.08	(0.72)	0.05	(0.70)	-1.03	(0.82)	1.73	(0.60)**	-0.96	(0.76)
Annual wage and salary	0.01	(0.01)	0.01	(0.01)	0.01	(0.01)	0.01	(0.01)	-0.01	(0.01)	-0.02	(0.01)	-0.02	(0.01)
Time varying effects														
<i>Per capita</i> GDP \times time	-0.02	(0.01)***	-0.02	(0.01)***	-0.02	(0.01)**	-0.02	(0.01)**	-0.02	(0.01)***	-0.02	(0.01)***	-0.02	(0.01)**
Industrialization \times time	-0.01	(0.00)***	-0.01	(0.00)***	-0.01	(0.00)**	-0.01	(0.00)***	-0.01	(0.00)**	-0.01	(0.00)***	-0.01	(0.00)*
Provincial pressure \times time	-	-	-	-	-0.07	(0.03)**	-0.06	(0.02)**	-	-	-	-	-0.03	(0.03)
Peer pressure \times time	-	-	-	-	-	-	-	-	-0.01	(0.00)***	-	-	-0.01	(0.00)**
Wald Chisq. (degree of freedom)	558 (10)		643 (12)		618 (15)		638 (15)		1,292 (12)		598 (11)		1,322 (19)	
N	5,809		5,799		5,799		5,799		5,809		5,809		5,799	

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. (two-tailed tests); Huber-White standard errors are in parentheses; All models passed proportional-hazards assumption tests.

dependency was also positive and significant, suggesting that the degree of fiscal dependency moderates the effect of provincial pressure. When the degree of provincial pressure is controlled, the more local governments that are fiscally dependent on their superiors the higher will be their adoption rates. Hypothesis 3 was thus supported. In addition, the interaction term between provincial pressure and time was negative and significant, indicating that the effect of provincial pressure also declines over time. Many provinces did not give coercive orders until they evaluated the performance of this system in early-adoption cities, so provincial pressure emerged as an important force only in the middle and late periods of diffusion.

Model 4 investigates the moderating effect of political status on provincial pressure (Hypothesis 5). The model shows that the coefficient of the interaction term between political status and provincial pressure was significant and negative, suggesting that provincial pressure has a weaker effect for high-status cities. Thus high political status indicates low political dependence. If an organization depends less on those who control its resources, the organization will be more likely to resist their pressure (DiMaggio & Powell, 1983; Oliver, 1991). Therefore, compared with lower-level governments, higher-level cities are better able to resist or defer the implementation of coercive orders from provincial governments. Hypothesis 5 was thus supported.

Model 5 explores the effects of peer pressure on adoption rates (Hypothesis 6). This model incorporates peer pressure and other city characteristics. The positive and significant coefficient of peer pressure showed that as the density of the adopters increases within a peer group (usually comprising same-level governments in a province), those who have not adopted the same institution feel compelled to adopt the new practice. This result supported Hypothesis 6.

Model 6 investigates the relationship between expert theorization and adoption rates. The estimated coefficient showed a positive and statistically significant effect, suggesting that a higher-level theorization of land banking related experiences and knowledge increase the adoption rate, supporting Hypothesis 7.

Model 7 includes all covariates. The model shows that institutional forces mediate much of the associations between rationalist variables and the adoption rate. Although the coefficients of *per capita* GDP and urbanization ratio stay significant and positive, the size of these effects is reduced significantly. Meanwhile, the main effects of the institutional factors revealed in previous models remain significant. The only exception is the interaction term between provincial pressure and transfer dependency. This could be attributed to the high correlations among the interaction terms that contain the same variable of provincial pressure (see Table 1). In addition, the time varying trends show that the effects of *per capita* GDP and industrialization ratio decrease rapidly over time. Although the effect of peer pressure also shrinks with time, compared with the GDP and industrialization its reduction rate is much slower.

DISCUSSION

Understanding the mechanisms for institutional change in China is a core agenda for students of institutional theory and market transition theory. Although researchers have achieved fruitful results in the study of business institutions (Bjorkman, 2003; Firth, 1996; Guthrie, 1999; Keister, 2002), our understanding of the transformation of public organizations remains limited. Borrowing insights from institutional theory, resource dependence theory, and the policy diffusion literature, this study contributes new knowledge to this area by exploring the mechanisms behind the diffusion of the land banking system.

This study has implications for the development of the rationalist and internal determinants models in policy diffusion research. On one hand, it confirms that efficiency considerations and local socioeconomic characteristics still influence the innovation decisions of public organizations. Higher *per capita* GDP, larger industrial sectors, and booming urban populations lead to a strong demand for urban construction land and more efficient land management systems. These conditions pave the way for the adoption of a market-based land management institution. On the other hand, this study also finds that the power of efficiency pursuit is limited in promoting a large-scale public organizational transformation, and its influence diminishes over time. Local socioeconomic forces seem to be more effective in the early diffusion period, but diminish later. This suggests that rational calculations and an indigenous impetus for innovations can explain only a part – usually the early phase – of the entire diffusion process. The forces that promote further expansion of land banking practices must be discovered from other sources.

This study also contributes new insights to institutional theory and policy diffusion literature. First, the results enrich our understanding of how the coercion mechanism works in transforming the state bureaucratic system. Although the study underscores the importance of state coercion in promoting the policy diffusion process in the state bureaucratic system, it refutes the simple coercion-compliance model and reveals that the effectiveness of coercion is conditioned by resource dependence relations among different government levels. It argues that complicated intergovernmental fiscal and political relations are crucial for predicting local responses to coercive orders from higher levels. Local governments will strategically choose compliance or resistance, depending on their degree of dependence on higher-level governments. High dependence, in the form of larger transfer dependency or low political status, brings greater possibilities of compliance; whereas low resource dependence, especially in the form of higher political status, makes a high-status city more likely to defer the implementation of provincial policies.

Second, this article suggests that interjurisdictional competition is important in promoting the reform of public organizations. China's *de facto* federalist political system provides incentives and a platform for local states to race each other in innovation adoption. In highly competitive environments, local states are very

sensitive to their peers' behaviour (Montinola et al., 1995; Walder, 1998; Zheng, 2007). They not only compete for production materials, capital, human resources, and favourable policies, but also try to emulate their competitors' strategies and practices. An important consequence of this interurban competition is that cities are encouraged to imitate their peers' seemingly successful strategies, even when the local effects of these new practices are unforeseeable.

Third, this study also calls attention to the rising influence of professional policy communities on public organization innovations. By investigating the influences of the loosely organized policy research community, this study sheds light on how policy professionals affect policy diffusion processes through collective theorization efforts or loosely organized social movements. Although the organizations of policy making and policy research professionals are still very loose, we cannot underestimate the effects of their collective efforts. These professionals have collectively constructed the proper policy measures for a new problem and determined the conditions under which the new policy measures should be adopted. During the transition period it is highly uncertain whether a new practice will work, so policy makers often follow the rule of 'crossing the river by feeling the stones' and acquiring new knowledge from the reform practices. This trial and error problem-solving method becomes an important expression of professionalization for policy makers. Using the number of policy discussions that appear in provincial dailies as a proxy, this study shows that the theorization efforts of policy professionals are significant in promoting the diffusion of land banking systems among Chinese cities.

Limitations and Future Research Directions

This study suffers from several limitations. First, it focuses on the diffusion of a new system among cities at the sub-provincial level. Such data are difficult to collect, especially from a country like China, in which there are huge disparities in terms of access to modern media and local efforts on information disclosure. Like other research that studies diffusions at the national or sub-national level, this article draws information from multiple data sources. Although these data have been carefully cross-validated, it is still difficult to completely eliminate measurement errors.

Second, publicly available longitudinal data on cities' socioeconomic characteristics are limited, so data that can be used to construct valid measurements are scarce. A variable that coincided more precisely with the underlying concept that this study intended to measure (e.g., normative forces) might have produced more accurate findings, and the results may have been stronger or may have yielded other effects. Future research should therefore use more complete data sets to test the findings of this research. It is likely that the mechanisms discovered in this study may not work well for the provinces that were excluded from the sample.

Third, this research focuses only on the population-averaged effects of various diffusion mechanisms, and does not explore each province's idiosyncrasies. Because land management measures and sub-provincial governance structures have vastly different historical legacies among Chinese provinces, future research will likely identify important yet undiscovered forces underlying the diffusion process.

Finally, land banking reform is only one of many important institutional changes that have occurred in the state bureaucratic system. To what extent the findings in this study could be generalized to other institutional changes still must be investigated. Future researchers should thus ask whether different diffusion mechanisms show varying effects across policy arenas.

CONCLUSION

China's economic transition has been regarded as a significant event in the worldwide diffusion of neoliberalism policies. Unlike its Western counterparts, China follows a distinct trajectory of neoliberalism expansion: economic liberalization does not coincide with political democratization, and a vibrant neoliberal economy coexists with a powerful authoritarian state (Lin, 2011). This coexistence leads to an important question: How does this coexistence influence the nature and pace of the transition? In other words, how do public organizations find ways to coexist or even promote market development? By investigating the diffusion mechanisms of the land banking systems – an institutional innovation in the state bureaucratic system – this study shows that both economic and institutional forces drive the innovation of public organizations. China's *de facto* federalist political system provides strong political and economic incentives for local states to pursue local economic growth. In addition, influences from intense regional competition, political pressures from higher levels, and professional persuasion from policy research communities all significantly constrain the local states' decisions on innovation.

This study also advances our understanding of the dynamics of institutional changes in the transitional period. Scholars have argued that large-scale institutional changes in formal rules tend to follow smaller scale *ex post* innovations at the local level and take a bottom-up trajectory (Nee, 2005). This study depicts a more complex picture showing that large-scale institutional changes within the state political system are the result of both local choices and external influences. Although local states play a crucial role in promoting institutional transformation, the central and provincial governments still exert considerable influence on the pace and direction of institutional reform.

NOTES

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