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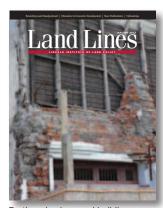
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Earthquake-damaged building in Talca, Chile

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# The Evolving Theory of Property Rights

Clearly defining the ownership of property is often thought to be necessary for the efficient operation of markets and the appropriate use of scarce resources. Specifying property rights within mature governance frameworks is relatively straightforward for traditional private goods, but it becomes more complex for common property goods such as groundwater, environmental resources, irrigation systems, forests, and fisheries.



**Gregory K. Ingram** 

Common property goods are often subject to overexploitation (the well known "tragedy of the commons"), and many observers argue that the sustainable use of common property can be solved simply by employing one of two alternatives: private ownership, or public ownership operating within a clear regulatory framework. The argument is that either approach can internalize externalities and reduce transaction costs.

This notion that there are only two discrete solutions private ownership or public ownership—to promote the sustainable management of scarce common resources has proven problematic for at least two reasons. First, neither private nor public ownership has always conserved scarce resources well, as in the case of the timber industry. Second, many alternative property rights approaches have been successful in managing scarce common resources in a sustainable manner, in some cases over hundreds of years.

Examples of alternative property rights approaches include the management by farmers of irrigation systems in Nepal, by villagers of Alpine grazing lands in Switzerland and Italy, and by villagers of mountain grazing land and forests in Japan and Norway. In all of these cases, farmers owned their private agricultural parcels and also participated as communal owners of commonly held resources.

Analyses of many cases of successful common resources management reveal that specific practices vary widely and depend on underlying institutions, social norms, culture, and ecological conditions. Accordingly, specific practices are usually not transferable from one context to another.

However, research also shows that participants in successful systems have seven elements in common: accurate information about the resource; a common understanding about the resource's benefits and risks; shared norms of reciprocity and trust; stable group membership; a long-term perspective; decision rules that avoid either unanimity or control by a few; and relatively low-cost monitoring and sanctioning arrangements.

These systems work best when the common pool resource is in a fixed location, such as forests, grazing land, mineral deposits, and many environmental resources. When the location of the common resource is not fixed, however, virtually no single property rights approach has been very successful. This is famously the case for fisheries, where the stock of fish is mobile and its size is difficult to track. Most property rights systems applied to fisheries give property rights to the annual catch, not to the underlying stock. Many approaches have been attempted to control fish catches, and the most promising current practice uses transferable quotas, but this approach is still a work in progress.

An excellent summary of the evolving theory of property rights is available in the recent Lincoln Institute book edited by Daniel Cole and Elinor Ostrom, Property in Land and Other Resources. Elinor Ostrom in particular has contributed greatly to the property rights literature, and her work in this area was honored last year when she was awarded the Nobel Prize in economics.

The volume includes chapters that address the complexity of property rights and their applications to common pool resources such as air, land, water, and wildlife (including fisheries). In addition, two chapters review the selforganization of property rights practices by miners during the 1849 California gold rush and more recent gold rushes. Those authors found that very similar property rights practices emerged in other such mining situations.

For more information and to order the book, visit the Lincoln Institute Web site at www.lincolninst.edu. L



© Yu-Hung Hong

Many earthquake-damaged buildings remain abandoned in Talca, Chile.

Yu-Hung Hong and Isabel Brain

he current state of global urban development is unsettling and plagued with manmade and natural disasters. In many developing countries, the government does not have the fiscal and institutional capacity to build affordable housing and basic infrastructure for the growing urban population, resulting in a proliferation of informal settlements and slums. At the same time, natural disasters in some of these distressed regions have destroyed homes, roads, water and sewage systems, and other public facilities, exacerbating the already limited basic services available to the urban poor.

In response to these problems, many international aid agencies such as UN-HABITAT and the World Bank, as well as governments, scholars, and practitioners, are looking for new ideas or repackaging existing ways to rebuild cities. This article discusses a long-established land management tool that has attracted recent attention—land readjustment (LR)—and describes how selected elements of this tool are being adopted to assist post-earthquake reconstruction efforts in Chile.

The LR approach emphasizes the integration of the urban economy, city planning, law, and governance with land management to form a comprehensive urban development or upgrading strategy. It requires an interdisciplinary team of experts with different perspectives to work on a concrete land development project. Although many scholars such as Doebele (1982) and Hong and Needham (2007) have emphasized the importance of this integrated approach, some practitioners perceive it as merely a tool to facilitate land transactions. This narrow view has limited opportunities in some developing countries to resolve urban upgrading and development problems in a more comprehensive way.

The recent resurgence of interest in LR is due to the recognition of the importance of coordinating economic, legal, political, and social institutions in

the design and implementation of urban (re)development plans. Practitioners are also contemplating the possibility of extending LR from management of peri-urbanization and post-disaster reconstruction to slum upgrading, for example in some rapidly urbanizing African cities. The application of this LR approach to countries where the technique has never been used is still at an experimental stage. Potential pilot projects are being designed, but have not been fully implemented, so further research is needed to test the validity of assertions about this approach.

#### **Challenges of Urbanization**

In 2010, about 50.7 percent of the world's population (3.5 billion people) lived in urban areas (World Bank 2011). The percentage is expected to increase to 70 percent by 2050, mostly in the periphery of secondary cities in developing countries. According to UN-HABITAT (2011), onethird of the urban population in developing countries (1.2 billion people) lives in slums and, despite substandard living conditions, these populations are increasing, especially in Sub-Saharan Africa and the Asia-Pacific region. Between 2000 and 2010, the number of slum dwellers increased by six million annually (Cities Alliance 2011).

Unfortunately, infrastructure and basic service development in most African countries have not increased at the same rate. Cities where sanitation, roads, water, and other services were already underdeveloped have limited fiscal resources and struggle with accommodating the unprecedented increase in population. Two major problems that hinder urban upgrading are holdouts in land assembly and lack of public funds to finance infrastructure—issues to which we will return.

Natural disasters also have taken a toll on urban populations. According to a United Nations estimate, earthquakes, tsunamis, landslides, floods, and volcano eruptions caused economic damage totaling \$109 billion in 2010, three times more than in 2009 (Reuters 2011). Cities in developing countries with poor infrastructure and fiscal health are particularly vulnerable and are facing increasing price tags for both post-disaster reconstruction and adaptation to future calamities. Again, solving the problems associated with land assembly and infrastructure financing are crucial.

Conventional solutions for dealing with land assembly problems, such as compulsory purchase (eminent domain) and market transactions, are onerous. With increasing global demands for democratic governance and the realization of human rights to adequate housing, secure tenure, and protection from forced eviction, the traditional approach of relying on coercive measures that take land from owners or occupants for urban expansion and redevelopment is encountering strong legal opposition and public protests (table 1).

Using the market to facilitate voluntary land transfers is also problematic. Holdouts by individual landowners could thwart the redevelopment project and increase compensation costs for land acquisition. In some African countries where market mechanisms are not yet fully developed, unequal access to information has led to land grabs and speculation by local elites. As a result, the urban poor were either forced out or bought out from their neighborhoods and were relocated to remote areas where access to employment, public transportation, and basic services are limited.

To make matters worse, the fiscal outlook for cities in developing countries is bleak, and the opportunities to speed up the construction or repair of housing and basic infrastructure are limited. The 2008 subprime mortgage market meltdown in the United States has had adverse repercussions for municipal finances around the world. The decline in demand for imports in industrialized nations and the tightening of liquidity in the financial markets has slowed global economic growth. As exports to developed countries decrease, incometax and value-added-tax collections in less developed nations also drop. The reduction in tax revenues exacerbates the already tight local budgets and further undermines the ability of municipalities to repair disaster-damaged infrastructure or build new facilities to accommodate rapid population growth.

#### Land Readjustment as an Alternative

LR has been practiced in many countries to achieve policy goals ranging from farmland consolidation to inner-city revitalization (Doebele 1982; Hong and Needham 2007). Its basic principle is to organize landowners to act collectively—in cooperation with a municipality and/or private developer to pool their land in order to accomplish a redevelopment project.

LR is often used to re-parcel land when existing parcel boundaries are in conflict with the current

TABLE 1 Comparison of Land Assembly Approaches	
Compulsory Purchase	Land Readjustment
Reliance on coercion or seller's exclusive gains	Reliance on community participation and empowerment
Cash-based transaction that imposes a heavy fiscal burden on local governments	Equity-based transaction that reduces upfront capital requirements for land acquisition
Relocation of the urban poor to remote areas with limited access to jobs and public services	Relocation provided within the same neighborhood with improved tenure security and housing conditions for the urban poor
Redefinition of existing occupants, often through gentrification of the redevelopment area	Preservation of the existing community
Exclusive rights against the existing community	Inclusive obligations to the existing community

land use plan. One important outcome is that a portion of the readjusted land can be retained by the development agency for construction of necessary infrastructure and basic services. If LR is not used, this land would have to be acquired by the local government, which could entail a huge upfront cost.

In return for the owners' or occupants' land contribution to the project, each participant receives, upon completion of the program, a new parcel proportionate in size or value to the original one. The size of the parcel may be smaller, but the value is greater due to land improvements and infrastructure created by the project. In this way, LR generates desirable urban development patterns, increases land values, allocates these increments to the involved parties, and limits displacement.

What is important about the recent interest in LR is its renewed emphasis as a mechanism for building legal and social institutions to govern urban development. The major goal is to combine job creation, land use planning, urban densification, public-private partnerships, and value capture for public infrastructure financing in one comprehensive policy package.

## **Potential Advantages and Disadvantages**

Different elements of this unified goal can be emphasized depending on the context. For instance, in the design of a LR project for urban upgrading in an African city where residents do not have legal property rights, policy makers can legitimatize the occupants' claims to land and allow them to exercise their right to participate in the project. After land is pooled, readjusted, and serviced, the

residents will be invited back to the neighborhood to rebuild their homes or receive an apartment unit with legal title. This is a win-win approach because it allows squatters to improve their living conditions and tenure security, and it increases development densities to enable the city to obtain much-needed land for urban expansion.

LR can also help implement citywide land use regulation incrementally. To ensure that individual LR projects add up to a coherent whole, they must be conducted as part of a comprehensive urban planning process. In situations where local governments lack the capacity to execute a large-scale master plan, related LR projects can be implemented in an orderly sequence and at a manageable scale to put into action a coordinated, long-term development strategy.

In addition, LR can engender democratic governance. The core principle of LR is to build consensus and cooperation among the parties involved in land development. These parties include formal landowners, informal landholders, renters, NGOs, national government agencies, city officials, and private developers. The process entails grassroots mobilization by giving the urban poor real bargaining power to approve LR proposals. Agreement from the supermajority of landowners and renters is required before LR can proceed, thus ensuring that the government (or a private organizing agency) will pay special attention to the needs of the underprivileged groups and avoid confrontation caused by the threat of forced eviction at the very beginning of the project.

Finally, LR can facilitate land value capture for financing local infrastructure and social services.

In readjusting the land boundaries, land space is created by increasing development densities. This land space can then be sold in the market to raise funds to defray a portion of the infrastructure costs. This technique creates a clear connection between the development benefits received by landholders and the price that they need to pay to make the program financially viable.

Despite these potential advantages of LR over conventional land assembly methods, it is hardly quick or uncomplicated. LR is particularly difficult to implement in developing countries where public participation is not integrated into urban planning or where there is limited capacity to maintain ownership records and resolve competing land claims. When property owners do not recognize their obligation to pay for basic infrastructure and services, requests to give up a portion of their land to cover the project costs will be strongly resisted.

Another concern is that LR reduces plot sizes, causing problems in many informal settlements where people often rely on extra space to earn rental income or conduct agricultural and business activities. In some cases, urban legislation is often too rigid for facilitating LR. Furthermore, different stakeholders may value real assets in diverse ways, making consensus building difficult. Some see possible improvements in living conditions, neighborhood amenities, social networks, and cohesiveness of community as the predominant factors. Others may make their decision based solely on monetary gains.

The integrated LR approach is designed to target all of these issues by focusing on institutional design and development. It emphasizes learning from past LR experiences to illustrate the importance of local context and enhancing this tool to accommodate a wide range of variables and situations. In addition, future adoption of the technique will search for a good fit rather than a single best practice. Most fundamentally, the design of LR projects must be based on multiple perspectives ranging from political economy and anthropological approaches to legal investigation.

#### **Designing Land Readjustment in Chile**

On February 27, 2010, a massive earthquake and tsunami destroyed a large part of Central Chile. Three regions—O'Higgins, Maule, and Bio-Bio—comprising 5 major cities and 45 small towns were seriously damaged; more than 80,000 homes were

destroyed, and about 108,000 units were severely damaged (figure 1).

In response to this unprecedented disaster, the Chilean government expanded its National Reconstruction Plan to include new mandates and more flexible policies to speed up its post-earthquake reconstruction efforts. This plan offers four types of assistance in the form of vouchers to affected families: (1) US\$24,144 for rebuilding a new home on existing land; (2) US\$19,083 for buying a new home in another neighborhood; (3) US\$3,761 for repairing houses that were partially destroyed; and (4) a special bonus of US\$4,200 if the destroyed house is located in a heritage zone (Ministry of Housing and Urban Development 2011).

Despite this financial assistance from the government, affected property owners are facing two major problems. First, because the reconstruction program gives priority to low-income households, the money provided by the state to middle-income





Basic model homes are part of the national voucher program for low-income families displaced by the earthquake. families is insufficient for them to rebuild homes of the same size and quality or in the same neighborhood. Property owners without insurance coverage who want to build a similar house must sell their land and move to another neighborhood where the land price is lower. Those who live in tsunamidamaged areas now considered unsafe for redevelopment must resettle further inland, yet that may limit their access to jobs and public services.

Second, selling their land to finance reconstruction may not be a viable option for all affected residents. Some landowners refuse to sell to private developers who offer a low price because the property is so badly damaged. Others who are unable to sell their land may not have sufficient financial resources to rebuild. This persistence of unlivable houses and vacant lots covered with debris further dampens the private incentive to reinvest in the neighborhood.

To assist the post-earthquake reconstruction effort, the Lincoln Institute of Land Policy and the ProUrbana Program in the Public Policy Center at the Catholic University of Chile (the team) put forward a joint proposal to the Chilean government to experiment with LR.

## The Pilot Project: Las Heras, Talca

The team decided to conduct its first pilot in the Las Heras neighborhood in Talca for four reasons.

First, Las Heras was ripe for redevelopment even before the earthquake. It is a middle-class neighborhood with large old houses and a beautiful main square. Good social networks exist among its residents, organized by the church and local NGOs, although its development had stagnated for many years due to economic restructuring of the Chilean economy. The central government was offering Las Heras assistance in developing affordable housing through the national voucher program, and these housing subsidies later became an important potential funding source for the proposed LR project.

Second, the Public Policy Center has another program called *Puentes* (Bridges) that conducts collaborative research projects with local municipalities, including a preexisting work agreement with Talca, which facilitated prompt support and cooperation from city officials.

Third, Talca has a master plan that allowed the team to design a series of related LR projects to be implemented step-by-step, so it could fulfill the city's long-term development plan. Preliminary land ownership and demographic information, land use data, and property damage assessments in different neighborhoods are also available.

Fourth, the local government and private developers in Talca were interested in increasing urban densities. Densification provided the much-needed profit incentive for the private sector to redevelop damaged sites, and it could help the local government achieve its objective of increasing and upgrading the housing supply.

# **Buy-In from All Involved Parties**

Following the integrated LR approach, the team recognized the importance of gaining support from the central government. It organized a seminar in Santiago in May 2010 to present the concept of LR and exchange views with top officials from the Ministry of Housing and Urban Development (MHUD). After several rounds of follow-up discussions, the director of the National Program of Housing Reconstruction agreed to purchase reserved land generated from the proposed LR project, thus providing a guarantee for one of the funding sources, and agreed to go to Talca with the team to encourage property owners to participate.

To obtain critical local government involvement, the team travelled to Talca in September

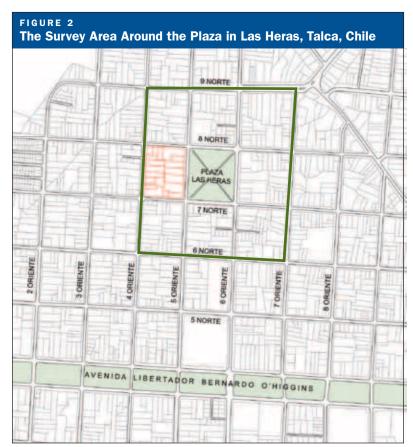
2010 to present the LR ideas to city officials. The team also met with selected property landowners to determine if they might be interested in contributing all or part of their land as capital to finance the reconstruction of their homes and neighborhood. In another visit, some team members also met with school and community leaders, emphasizing the need for broad community support for the project's success.

The team next began to gather detailed data about the area by conducting a survey of residents in eight blocks comprising 217 lots near the main plaza of Las Heras (figure 2). Team members completed 135 questionnaires over the telephone and then interviewed selected residents. The survey results indicated that 77 percent of the respondents trusted their neighbors, and the majority of them (65 percent) wanted to stay in the neighborhood and were willing to work with their neighbors to rebuild the community. Only 12 percent of respondents planned to sell their property and relocate to another area. This information revealed that organizing property owners for LR was feasible.

## **Project Design**

Because the majority of residents in Las Heras are unfamiliar with the concept of LR, the strategy started with a small pilot project to demonstrate the applicability of this method. The team chose a block near the plaza and proposed three scenarios for combining 8 to 12 sites for LR. The number of lots included in the proposed project would depend on the levels of difficulty involved in negotiating with affected property owners. To facilitate the participation process, the team prepared visual images of what the neighborhood environment might look like after the project (figure 3).

The team also conducted detailed financial and legal feasibility studies for the project. A tentative plan for financing the pilot included a careful calculation of the amount of land that each owner would need to contribute based on the availability of government subsidies, estimated building costs, compensation for temporary relocation, and a projected land price at the completion date of the project. The financial study also revealed that constructing housing units at an estimated future price of US\$46,000 per unit would allow the project to be self-financing and provide the developer with a 10 percent profit margin—under the assumption that MHUD would purchase the reserved



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Source: © Julio Poblete, DUPLA/Diseño Urbano y Planificación, Providencia, Chile

land to build affordable housing for low- and low-to-middle-income households after LR. It was also estimated that 24 percent of the housing units within the block would be affordable for low-income households. This would help the MHUD





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**Vacant lots** full of debris from traditionalstyle buildings damaged in the earthquake can be found in the same neighborhood as newer townhouses, which provide a model for new construction in Talca.

attain its policy goal of social integration through the provision of subsidized housing.

The Real Estate Co-ownership Law in Chile requires all participating owners of the LR project to sign a legal document specifying their rights and liabilities. For example, any sale of land held by the designated organizing agency would require the consensus of all participating owners. A legal contract signed by the agency and each participating owner would specify explicitly the number of housing units that the owner would receive at the end of the project and the date of the delivery. The contract would also guarantee compliance by requiring the agency to pay compensation to owners in case of failure to transfer properties in a timely manner and of acceptable quality. The agency also needs to submit the proposed plan to the city. The Municipal Works Department would review the project, approve the building plan, and authorize the transfer of land. The approved plan would then be recorded by the registrar.

Although the research conducted by the team shows that LR is feasible in Las Heras, progress in convincing landowners to participate has been slow due to five key challenges.

First, most property owners are unfamiliar with LR, and there is no existing example in Chile to show how the idea could work. The lack of precedents makes community organizing difficult.

Second, city officials have not provided sufficient support in organizing community meetings or interacting with property owners directly about the proposed project.

Third, many affected property owners who received assistance from their extended families or friends have already relocated to other areas. These owners are in no hurry to rebuild their homes and are delaying the transfer of their land until they receive a higher offer from a private developer or the government. In Chile, there is no LR law that can force these owners to transfer their real assets.

Fourth, not all buildings in the neighborhood were destroyed by the earthquake, and the owners of the unaffected homes are not willing to give up their existing plots for a neighborhood-wide redevelopment.

Fifth, although the survey shows that many owners are willing to work on rebuilding with their neighbors, solving local problems through collective action is not a social norm in Chile. Some property owners have a strong sense of entitlement to receive public resettlement assistance, which contradicts the idea of community self-help.

#### Interim Assessment

Although the LR approach in Las Heras is still a work-in-progress and it is too soon to predict if the team will be able to overcome local challenges, the project has already generated several observable impacts on Chile's post-earthquake reconstruction policy (Public Policy Center 2011).

First, LR gives property owners in Las Heras an additional option for reconstructing their homes. Before the proposal, they had to either sell their properties to a private developer and move to another area or take the government's subsidies and rebuild a house of smaller size and lower quality. LR provides residents with the opportunity to remain in the neighborhood and to attain the highest possible living standard by using their land as capital for home reconstruction.

Second, LR opens a new channel for the central government to work with local communities on reconstruction projects. The main reasons that the LR proposal for Las Heras could go forward are MHUD's willingness to buy land, provide assistance in encouraging landowners to participate in LR, and give participating landowners the first priority to receive government housing vouchers to finance reconstruction.

Third, the introduction of LR has influenced the government's overall post-earthquake reconstruction strategy. Through this holistic approach, public officials are designing a comprehensive reconstruction plan to rebuild the entire neighborhood coherently, rather than giving subsidies to individual homeowners to rebuild their houses separately. The MHUD has also invited the team to assist its reconstruction effort in the earthquakedamaged city of Constitución, indicating that the government has taken LR seriously as a viable option for other projects.

Fourth, all discussions among the central and local governments, landowners, NGOs, developers, scholars, and urban designers about LR have engendered an environment of mutual learning and understanding, which in turn is reshaping the governance structure for post-earthquake reconstruction. The involved parties have begun to realize that neither a top-down nor a bottom-up approach is sufficient to generate satisfactory solutions. Cooperation among all interested parties is paramount. The LR experiment has fostered a social discourse that helps all segments of society learn how to solve their problems collectively.

#### Conclusion

Like all policy experiments, the current proposals to test the integrated LR approach for urban upgrading and post-disaster reconstruction in countries where the idea is new will face uncertainties and challenges. Yet, given the mixed outcomes of conventional land assembly methods in many (re)development situations, LR could offer another option for policy makers, practitioners, and other interested parties to consider.

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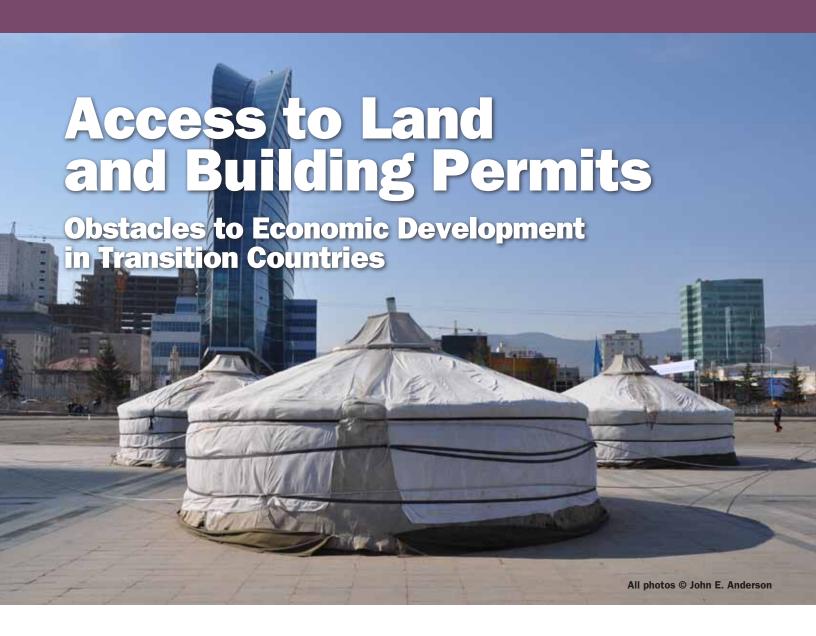
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**Traditional Ger** homes are common in the City of Ulaanbaataar, Mongolia, where new high-rise office buildings are being built.

John E. Anderson

imited access to land is a substantial hindrance to economic development in many transition economies. Additionally, when the ability to gain appropriate permits to use the land is subject to delays, bribes, or corruption, the efficiency of the land allocation mechanism is compromised and overall economic growth is constrained.

In this article I summarize findings from empirical models of land access, permit activity, time costs, and corruption, using both country and firm characteristics as explanatory variables. Data come from the European Bank for Reconstruction and Development (EBRD)-World Bank Business Environment and Enterprise Performance Survey (BEEPS 2009) for business enterprises in transition economies of Europe and Central Asia, supplemented with country-specific economic measures and EBRD indices of reform. Results indicate that limited access to land and difficulty in obtaining permits are substantial impediments to economic development, and these conditions clearly create an environment in which bribery flourishes.

#### **Land Markets in Transition Economies**

The context of this study is analysis of firm-level performance in transition economies where access to land has been subject to varying types of land privatization regimes in the past 20 years since independence. Stanfield (1999, 1-2) provides a helpful strategy for thinking about how land markets have been created in such economies, recognizing that "Markets in land linked to markets in capital and labor are central to market economies."

Indeed, land market liberalization must be linked to liberalization of capital and labor markets simultaneously if transition countries are to advance their economies. Stanfield also suggests that many existing institutions of land administration must make radical changes to support the privatization of land rights. Defining and enforcing property rights and providing transparent and efficient land registration mechanisms free of bribery and corruption are essential to supporting economic development (Estrin et al. 2009).

Boycko, Schleifer, and Vishny (1995) suggest two ways that access to land and real estate is critical to restructuring a transition economy and promoting economic development in general. First, land and buildings are complementary to plants and equipment, which typically have already been privatized in these countries. Until land and buildings are also privatized, control of these productive assets continues to be held jointly by local politicians and managers, leading to an inefficient ownership structure. Second, privatization of land and real estate provides firms with a source of capital for restructuring their business investments. For example, a former state-owned enterprise that has surplus land and buildings can sell those assets to raise funds for other investments. However, Boycko, Schleifer, and Vishny (1995, 136) conclude, "Because it serves local governments so well, politicization of urban land and real estate persists, and slows down the restructuring of old firms and the creation of new ones."

Deininger (2003) makes the case that wellfunctioning land markets foster general economic development, citing four key tenets. First, in many developing economies the distribution of land ownership prevents operational efficiency. If land ownership cannot be transferred easily, or if land use is not separable from land ownership, then there may be a mismatch between the owners and the most efficient land users. If land markets are allowed to transfer land use from less productive to more productive uses, then overall economic efficiency is enhanced. Second, transferable land use rights can allow rural residents to move into the nonagricultural sector of the economy, which can help boost the output of that sector and the overall economy. Third, by making land use rights transferable the ownership and use of land can be separated, facilitating more efficient land use. Fourth, a well-developed land market allows land transfers to occur with low transaction costs, which frees up credit in the economy.

## **Economic Consequences of Limited Access to Land**

Firms use a combination of land, labor, and capital inputs to produce a given quantity of output. Consider a situation where the first input is land, for which the firm faces a constraint on the quantity available, but the other two inputs are freely available in any quantity needed. In a competitive market, a profit-maximizing firm uses additional units of any freely available input until the value of the additional product derived from the last unit of the input used equals its market price. In this case, however, if the available land is constrained, the firm would purchase a less than optimal amount. Consequently, the firm would not achieve an optimal input combination, leading to an inefficient allocation of resources.

Even if the quantity of land is not constrained, obstacles to obtaining building, construction, or use permits may impede the conduct of business. In such circumstances, the amount of land may be accessible, but the permitting process increases its effective price. Once again, the firm is forced to operate inefficiently.

In either situation one could ask, "What would the firm be willing to pay in order to be able to operate most efficiently?" Clearly, the land constraint or permit restriction imposes a cost on the firm and reduces its efficiency, and the firm presumably would be willing to pay a bribe to a government official to gain access to additional land or obtain a permit to use the available land. Hence, limited access to land and permits can encourage informal payments or bribes. Carlin, Schaffer, and Seabright (2007) have suggested that managers' responses to survey questions regarding the business environment in which they operate and the constraints they face can measure the hidden implicit cost of those constraints.

#### **Country and Firm Data and Survey Results**

The primary data for this study are 15 countryspecific characteristics from various sources and 13 firm characteristics from the 2009 round of the EBRD-World Bank BEEPS, which is conducted every three years. The survey covers a broad range of topics related to the business environment and performance of firms as well as questions on business-government relations. A total of 11,999 business enterprises in 30 transition economies of Europe and Central Asia are represented. These



A McDonald's restaurant thrives on the main street through Chisinau. Moldova, one of the transition countries where firms report the most severe land access obstacles in the BEEPS data.

> data have been used extensively in the transition and development literatures, most recently in Commander and Svenjar (2011). Table 1 lists the country and firm characteristics and indicates their effects on five aspects of economic development.

# Access to Land as an Obstacle to Economic Development

The BEEPS questionnaire asks firms about a number of potential obstacles to efficient operation, including access to land. A key question asks, "Is access to land No Obstacle, a Minor Obstacle, a Moderate Obstacle, a Major Obstacle, or a Very Severe Obstacle to the current operations of this establishment?" Survey respondents may also respond "Do not know" or "Does not apply." Overall, 43 percent of the firms surveyed reported land access as an obstacle to some extent. There is wide variation in firm responses across the countries in the sample, however, with the share of firms reporting land access as an obstacle ranging from a low of 6 percent in Hungary to a high of 62 percent in Kosovo (figure 1).

Nine of the 15 possible country-specific explanatory variables have a statistically discernable effect

on the likelihood that a firm will report land access as an obstacle (table 1, column 1). Firms were more likely to report land access obstacles in CIS countries (Commonwealth of Independent States, or former Soviet republics) and in faster growing countries. The CIS effect is particularly important, with firms in those countries approximately 28 percent more likely to report land access obstacles than comparable firms in non-CIS transition countries. In countries with a high VAT rate, firms were less likely to report access to land as an obstacle.

Among the EBRD indices of reform listed in table 1, the mixed likelihood of increases and decreases on these measures may indicate that uneven reforms across sectors of the economy can have opposing effects on firms' experiences. If land privatization and policies providing land access are not moving in tandem with financial market reforms and broader privatization reforms, such a pattern of mixed signs may emerge.

Firm characteristics associated with a greater likelihood of land access obstacles include competition against unregistered or informal firms, subsidization of the firm by the government, the number of employees, and limited partnership

	1. Access to Land as an Obstacle	2. Severity of Land Access as an Obstacle	3. Number of Permit Applications	4. Days of Effort in Permit Applications	5. Bribe Frequency
Country Factors					
Commonwealth of Independent States (CIS)	Increase	Increase	Increase	Increase	
Corporate tax rate				Decrease	Increase
EBRD index of banking sector reform	Increase	Increase			
EBRD index of competition policy	Decrease			Decrease	Increase
EBRD index of enterprise reform			Increase	Increase	Decrease
EBRD index of foreign exchange and trade liberalization		Decrease	Increase	Increase	Decrease
EBRD index of infrastructure reform	Increase			Increase	Increase
EBRD index of price liberalization		Increase	Decrease	Decrease	Increase
EBRD index of large-scale privatization	Decrease				
EBRD index of small-scale privatization	Increase	Increase			Increase
GDP growth rate	Increase		Increase		Increase
GDP per capita			Decrease	Decrease	
Private sector share of GDP	Decrease		Decrease		Increase
Size of agricultural sector			Decrease	Decrease	Decrease
VAT rate	Decrease		Decrease	Decrease	
Firm Factors					
Competition against unregistered or informal market firms	Increase				Increase
Female manager			Decrease	Decrease	
International quality certification		Increase	Increase	Increase	
Interviewer suspicions	Increase	Decrease		Decrease	Decrease
Joint venture with a foreign partner					Increase
Limited partnership legal status	Increase			Decrease	
Manager's experience	Decrease			Decrease	Decrease
Manufacturing sector	Decrease		Decrease		Decrease
Number of employees	Increase	Decrease	Increase	Increase	
Shareholding company traded on stock market legal status				Decrease	
Sole proprietorship legal status			Decrease	Decrease	
State-owned enterprise		Increase			
Subsidized by government	Increase		Increase		

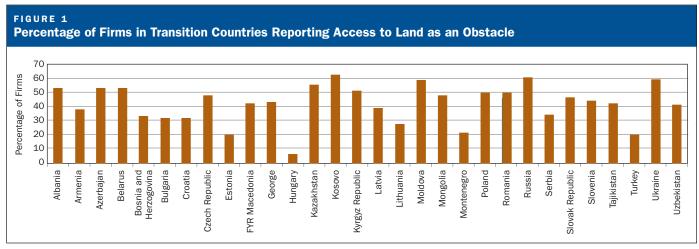
 $Notes: \textbf{Increase} = factor increases \ likelihood; \textbf{Decrease} = factor \ decreases \ likelihood; \textbf{blank} = not \ applicable$ 

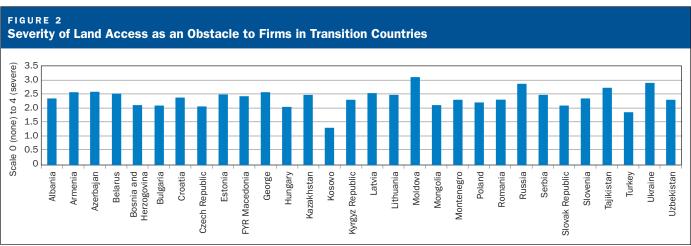
legal status. Of particular note are the firms that report they compete against informal market firms and those that are subsidized by the government. These two characteristics increase the reported probability of land access obstacles by 8 and 6 percent, respectively.

Presumably, state-subsidized firms also report that they compete against unregistered or informal market firms, so the combined increase in probability may be approximately 14 percent. On the other hand, characteristics associated with lower probabilities of reporting land access as an obstacle include operating in the manufacturing sector or having a more experienced manager.

Beyond merely stating that land access is an obstacle, firms were asked to report on the severity of the obstacle (figure 2). On a scale from zero to 4 (with zero indicating no obstacle and 4 indicating a very severe obstacle), the overall mean for the 5,206 firms responding to this question is 2.47. When we correct for sample selection bias, we take into account that firms reporting land access as an obstacle may be systematically different from those not reporting an obstacle. Country and firm characteristics with statistically significant positive and negative effects of severity are shown in table 1, column 2.

The BEEPS also includes a way for the interviewer to respond to concerns about truthfulness in the survey responses: "It is my perception that the responses to the questions regarding opinions and perceptions (were): Truthful, Somewhat truthful, Not truthful." Interviewer suspicions are associated with a greater likelihood of reporting land access as an obstacle (about a 3 percent greater probability). For example, among firms reporting land access as an obstacle, interviewer suspicions were associated with a significantly less intense reported obstacle. Apparently, suspicions are raised in the mind of the survey recorder when the firm representative is being overly optimistic relative to the recorder's expectations.





## **Permit Seeking**

In order to use the land to which it has access, a firm must be able to obtain relevant permits that can be crucial to the production process. By impeding land use, construction, or business occupancy permits, government officials may limit effective access to land. The BEEPS includes questions regarding the number of permits the firm obtained during the previous two years, the number of working days the staff spent on procedures related to obtaining those permits, formal and informal payments for permits, and waiting periods from application to receipt of permits. One question asks, "How many permits did this establishment obtain in the last two years?" Another asks, "How many working days were spent by all staff members on the procedures related to obtaining the permits applied for over the last two years?"

Responses to these questions are used in modeling both the number of permit applications and the related time costs (figures 3 and 4). About 34



Firms in Turkey report one of the lowest rates of land access as an obstacle in the BEEPS data, even though topographic features in Istanbul would appear to make access difficult.







An ancient **Buddhist temple** compound is being surrounded by new high-rise construction in Ulaanbaataar, Mongolia, the transition country with the highest reported bribe frequency in the BEEPS data.

percent of the businesses in the survey applied for permits, with a mean number of 3.9 applications, a mean number of 38.0 working days of effort, and a mean waiting time of 45.9 days. There is a very high variance among countries in the number of permits applied for, the days of effort expended, and the waiting time for permits.

The model of the number of permit applications reflects the interaction of supply and demand factors. A firm demands permits as it plans to develop its property while the government supplies permits according to its rules. Nine country characteristics have a significant effect on the number of permit applications requested, with four factors

increasing the number and five factors decreasing it (table 1, column 3).

To understand time costs involved for firms seeking permits, the modeling approach involves a first-stage model to control for the selection bias that may exist with systematic differences between firms applying for permits and those that do not apply. The second-stage model results for permit time cost show that ten country-specific variables have statistically discernable effects—four factors increase staff time expended and six factors reduce staff time (table 1, column 4). Two firm-specific factors significantly increase days of effort, while six reduce the number of days of effort.

#### **Bribes to Government Officials**

The BEEPS also asks a question about informal payments to government officials: "Thinking about officials, would you say the following statement is always, usually, frequently, sometimes, seldom or never true?...It is common for firms in my line of business to have to pay some irregular 'additional payments or gifts' to get things done..." Responses are coded on a scale of 1 to 6, with 1 being never and 6 being always (figure 5). In a simple regression model of the frequency of bribes, ten countryspecific explanatory variables and five firm-specific variables have statistically discernable effects (table 1, column 5).

# **Summary and Conclusions**

Limited access to land and permits to use that land can contributes to economic inefficiency and corruption in transition countries. In this research I have estimated empirical models of firms reporting limited access to land and permits and instances



of bribery as obstacles to economic development. Those models indicate that both country and firm characteristics affect land access, permit access and effort, and bribery.

At the country level, higher per capita GDP systematically reduces the likelihood of firms seeking permits, the number of permits, and the time cost to obtain them. That implies that more developed economies require fewer permits and present lower permit obstacles, thereby reducing costs. Furthermore, the higher the GDP growth rate the greater the likelihood that firms experience limited access to land and the need to apply for permits, as well as the likelihood that firms are asked to pay bribes. This may indicate bottlenecks in the development process as firms in CIS countries are much more likely to report that access to land is an obstacle. They also are required to apply for more permits, and they incur much larger time costs related to permit applications.

Higher corporate tax rates do not affect access to land or permits, but do increase the likelihood of being asked to pay bribes. Firms in more highly privatized economies report fewer problems with access to land and fewer permits needed, but more problems related to bribery. Indices of privatization and reform are often significant, but have both

positive and negative impacts. This may reflect uneven reform processes in which liberalization in one sector of the economy does not have full impact due to constraints in other sectors.

Firms competing against others that are unregistered or operate in the informal market are more likely to report limited access to land, more likely to seek permits and incur time costs related to permits, and more likely to be asked to pay bribes. Firms subsidized by the government or those with larger numbers of employees also are more likely to report limited access to land, seek more permits, and incur larger permit time costs.

The primary lesson to be learned from this research is that limited access to land is a serious obstacle to economic development in transition countries. Furthermore, the ability to obtain permits to effectively use that land is crucial. Limited access to land and permits not only hinders economic development, but also contributes to a culture of bribery and corruption. Countries wishing to speed their development process should therefore remove impediments to land access by fostering markets for land and land use rights, and should also remove unnecessary obstacles in the permit process. The result will be a more efficient use of land and a more dynamic economy. L

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From 1992 to 1996 she was attorney general for the Municipality of Rio de Janeiro, where she collaborated in the development of several far-reaching urban projects, including the Favela-Bairro program. She has also worked as director of legal services for a number of public entities and has published numerous articles on urban development, housing, governance, public administration, and preservation of the cultural patrimony. Her book on Preservation of the Brazilian Cultural Patrimony (Preservação do Patrimônio Cultural Brasileiro) is considered a basic reference for administrative and juridical decisions on this topic.

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# Sonia Rabello de Castro

LAND LINES: How did you become associated with the Lincoln Institute of Land Policy? SONIA RABELLO: I met Martim Smolka, the director of the Program on Latin America and the Caribbean, in the late 1990s, when I was researching how the traditional concept of property rights based upon civil law could be transformed in the context of urban law. The development of new urban laws could lead to conceptual changes in the way the right to property was originally understood, given the need to adapt the concept to meet the social and economic requirements of urban development. At that time, Brazil had not yet approved the federal urban development law known as the City Statute (Estatuto da Cidade), although the Brazilian Federal Constitution of 1988 had introduced the principle of urban development as a social function subject to public policy.

As a visiting fellow at Lincoln House in 2000 I became convinced of the need to create a new, more modern concept of property rights that would reflect the current urban reality in Latin America and allow for the use of the city by all citizens, whether they are property owners or not.

**LAND LINES:** Can you explain this property rights concept further?

SONIA RABELLO: It is the need to distinguish the right to own land from the right to build on that land. The Civil Code in Latin American countries follows the French model, which defines real estate property rights as having three components guaranteed to the owner: the right to use the property; the right to receive income accruing from the property; and the right to dispose of the property. Only the owner can exercise these rights. The right to build is not in itself an inherent component of this property right, but a condition for the owner to use the property, without which the utility of the property would be voided—and in this case the very meaning of the property right would be lost.

For the owner to exercise her ownership right to use the property, the public authority, through established urban planning regulations, must allocate a minimum building coefficient to that land. The building coefficient refers to the amount of development allowed on a parcel, also known as floor-area-ratio (FAR). The allocation of an equitable and free minimum building coefficient applied to all properties uniformly has a double function. First, it guarantees to all owners and possessors an economic use of their property. Second, it precludes the occurrence of unjust differences in the allocation of building coefficients among owners.

**LAND LINES:** Why is this concept important for Latin America?

SONIA RABELLO: All Latin American countries, including Brazil, have been addressing urban regulation and land policy at the national level, especially since the economic stabilization and redemocratization during the 1990s, when the need to consider the so-called accumulated social debt became a prominent issue. At the time, Latin American cities were experiencing acute problems due to the lack of basic infrastructure services such as sewer systems, public spaces, transportation, and access to affordable housing, as well as the challenge of creating a more equitable distribution of costs and benefits in the urbanization process.

**LAND LINES:** How relevant is Brazil's City Statute in this process?

SONIA RABELLO: The City Statute, which was approved in 2001, confirms the distinction between the right to own land and the right to build, a distinction that had been discussed and implemented since the 1970s in São Paulo and other Brazilian cities. The expression "right to build" as used in the Brazilian Civil Code had led many landowners to assume that their right to own land also included the right to build on the land, in keeping with urban legislation and norms.

How much and what can be built is reflected in the price of land. That is, parcels with a higher building coefficient than others, or parcels where commercial use is permitted as well as residential use, sell at prices that incorporate the benefits freely given to landowners by the public authorities. When this happens, landowners appropriate as their private good the

building rights provided by urban law, even though they had not invested in the infrastructure or services needed to support the land development. As a result, the costs of urbanization fall entirely on the public authority while private citizens profit, contradicting the general legal principle barring enrichment without just cause.

LAND LINES: What does the principle of "enrichment without just cause" mean? **SONIA RABELLO:** This general principle of law, accepted in most Latin American countries, deems unacceptable an increase in private wealth that does not result from the person's own labor or investmentthat is, a legitimate cause pertaining to the person who benefits financially. In Brazil this principle is explicit in the legislation, specifically in the Civil Code, and is applicable to the entire juridical system.

**LAND LINES:** How does the City Statute provide for the separation of the right to own land from the right to build?

SONIA RABELLO: This concept was introduced through the instrument known as "charge for awarded building rights" (outorga onerosa do direito de construir) in Art. 28: "The master plan may delineate areas where the building right can be exercised above the basic coefficient adopted, given a counterpart payment by the beneficiary." It is important to emphasize that the City Statute is a federal law that addresses the content of real estate property rights and has the same hierarchical standing as the Civil Code. Thus, if the law states that the public authority shall charge for a given right, then that right does not belong to the person to whom it is given.

LAND LINES: In what way does the "charge for awarded building rights" help to preclude enrichment without just cause?

**SONIA RABELLO:** The charge extracts the corresponding value of such rights from the land price. In other words, without that charge, the land price would include the value of the building rights freely granted to the landowner by the urban planning legislation. Without the charge, when the landowner sold the land he would be paid according to its market

value, which includes the maximum use permitted on that land.

**LAND LINES:** However, if I buy land expecting to build at a given floor-area-ratio that exceeds the basic coefficient and the public authority charges for these awarded building rights, wouldn't that imply paying twice for the land?

**SONIA RABELLO:** No, as long as the system of acquiring building rights from the public authority is well-established. Under the new law, building rights above the minimum coefficient belong to the city as a whole and must be purchased separately from the public authority. As a result, when paying the landowner, the buyer discounts from the land price the value of the additional awarded building rights.

**LAND LINES:** In what other ways is this charge implemented to benefit society? **SONIA RABELLO:** In addition to addressing unjust enrichment, the principle concerns the legitimacy of recovering the added land value generated by public sector interventions in the urbanization process, and to prevent the added value accruing to the landowner. This principle is also reflected in the compensation paid for urban land expropriation. When not recovered by the public authority, the value of the additional building rights becomes an integral part of the market price. If the public authority expropriates that land, the landowner will receive compensation equivalent to the market price, which includes the land value plus the value of the building coefficient granted by the public authority free of charge.

LAND LINES: Since the property tax is imposed on real estate property, wouldn't this charge constitute double-taxing?

**SONIA RABELLO:** To understand why this is not the case we need to look at the important distinction between the Colombian and Brazilian legislation. The Colombian law classifies the value capture charge as a tax, but in Brazil it is defined as an instrument for the public authority to recover a good that belongs to society. That is, the nature of the charge is a responsibility relative to the costs of urbanization. A decision by the

Brazilian Supreme Court (RE509422 STFSC of 2008) resolved this issue by ruling that the charge for awarded building rights is not a tax but a payment for which the landowner is responsible.

I think this juridical opinion is coherent given that a tax corresponds to a contribution to the public treasury from one's private assets, but, as noted, awarded building rights are not privately owned but are a public good that belongs to the city as a whole. To classify the value capture charge as a tax suggests a juridical inconsistency, since taxation is a form of assessing private wealth to finance public goods and services. This is not the case in Brazil, since the charge is levied on an essentially public asset.

LAND LINES: Does the judiciary in Latin America accept and implement these concepts? SONIA RABELLO: Not uniformly or consistently. These juridical concepts fundamentally change the traditional understanding of property rights. Because of that, the principles upon which they are based and the logic behind them must be disseminated and assimilated more broadly. This is a judicial evolution that has to happen in order to reduce the exacerbated social exclusion that characterized Latin American cities.

LAND LINES: How has the Lincoln Institute's Program on Latin America and the Caribbean contributed to this new vision of land policy in the region?

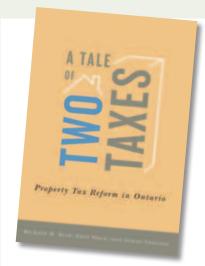
SONIA RABELLO: The Institute has been a very important influence in clarifying land policy issues among public officials and politicians in Latin America, especially through its training programs in which participants can be exposed to such principles, concepts and ideas, exchange experiences, and build a new land policy culture. The Institute has developed a critical mass of people committed to improving the quality of land policies and promoting new strategies to finance urban development. Understanding that individual property rights can coexist with social rights to the city has been a critical factor driving the evolution of urban thinking in the region. L

# A Tale of Two Taxes: **Property Tax Reform in Ontario**

The Canadian province of Ontario has found it difficult to get the property tax "right." One reason is that its property tax is not one tax, but two: a tax on residential property and a tax on business. These two taxes differ in their political dimension and economic impact, and in how they are administered. Tax reform has been a particular challenge because the local governments-municipalities, regions, and school boards—depend heavily on property tax revenues compared to other local funding sources.

This book examines the broad reform of the Ontario property tax in 1998. The objectives of this reform included introducing a full market value assessment, establishing a property tax system that would be widely accepted, and removing property tax reform from the provincial political agenda. Although the reform effort was lauded by experts at the time, its overall objectives were not achieved. In fact, the new assessment system may have ultimately weakened the role of the local property tax. Good property tax design needs to recognize the important differences between taxing housing and taxing business property.

Revenue from the property tax alone is not sufficient for large urban areas to pay for the range and level of public services for which they are responsible. The paths to improving the property tax-for example, abolishing the heavily discriminatory taxation of business property-would leave a major revenue hole in local budgets. The question is how to make up for this gap. The authors consider two approaches to the problem: restructuring education finance and introducing a new form of business taxation, at both the provincial and local levels.



#### A Tale of Two Taxes: **Property Tax Reform in Ontario**

Richard M. Bird, Enid Slack, and Almos Tassonyi February 2012/288 pages/Paper/ \$30.00

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Over the past decade Ontario was able to successfully adopt a uniform, provincewide market value assessment system. However, its experience suggests that when reforms in property tax administration are combined with sound reforms in both property tax policy and some aspects of local governance and finance, they are more likely to bring about the desired benefits.

Many jurisdictions around the world have been advised to implement major reforms in property taxation to resolve local government finance problems. This detailed evaluation of Ontario's reform in both property tax policy and full market value assessment shows that, while such reforms are possible, they require very careful design, implementation, and sustained follow-up if they are to succeed, especially in large metropolitan areas.

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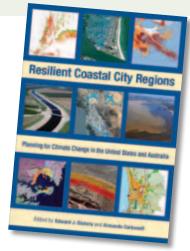
# **Resilient Coastal City Regions:** Planning for Climate Change in the United States and Australia

The importance of dealing with potentially severe climate impacts is becoming increasingly clear. In recent years, we have seen a number of extreme temperature and precipitation events, with climate records set in countries around the globe, but notably in the United States and Australia.

The Lincoln Institute initially became involved in the issue of climate change through our work with planning directors in the 30 largest cities of the United States. Beginning in 2006 these city planners started raising the issue of how to respond to their mayors' questions about global warming. Many of the mayors were already signing the U.S. Conference of Mayors Climate Protection Agreement, launched by Seattle Mayor Greg Nickels in 2005 as the Kyoto Protocol was going into effect.

Building on a number of Institutesponsored working papers, policy focus reports, and research seminars over the past five years, this book reports on responses to climate change in nine coastal cities and metropolitan regions in the United States and Australia. The two countries, both large, sprawling, and showing a predilection for coastal development, have much in common when it comes to climate change. First, they are among the highest greenhouse gas (GHG) emitters per capita in the developed world, with Australia usually heading the list and the United States close behind. Second, both countries are exposed to significant climate-related risk relative to sea level rise and storm surge, drought and water shortage, floods, wildfires, and heat waves. The city regions documented here represent some of the most critical conditions faced in the two countries.

This book deals with both mitigation (the reduction of GHG emissions) and adaptation (managing the risk of climate impacts that cannot be avoided) as the terms are generally used in this field. At least from the vantage point of the United States, it appears that the pendulum has swung from an initial emphasis on mitigation, as reflected in the mayors' initiatives in response to the



#### **Resilient Coastal City Regions: Planning for Climate Change** in the United States and Australia

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Kyoto Protocol, to one focusing on adaptation, as cities begin to prepare for the onslaught of climate-related impacts.

The nine cases show a range of adaptation responses. However, as explored in the concluding chapter, to avoid catastrophic results, it remains necessary to significantly reduce GHG emissions. While there are encouraging developments at the national level in Australia, recent analysis suggests that the time for action is critically short.

The pivotal environmental issue of our time has largely left the world stage as governments across the globe struggle for economic stability in the wake of the financial crisis of 2008. In spite of mixed prospects for action at the international and national levels, state and local governments have shown a greater ability to respond to climate change. Resilience and adaptation are coming to the fore in public discussions, with increasing attention given to the impacts of changes in climate on human welfare and the integrity of ecosystems.

In bringing forth this volume, the aim was to document approaches that will be useful not just in the United States and Australia but more broadly in coastal regions throughout the world. We are humbly aware that this is only an initial response to a challenge with a magnitude of potential impacts never before experienced in human history, a challenge that will test our ability to work together at every scale.

#### Introduction

Climate Change and Coastal City Regions, Armando Carbonell and Edward J. Blakely

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- 7. Sydney, Alan Cadogan
- 8. South East Queensland, Greg Laves and Peter Waterman
- 9. Perth, Laura Stocker, Peter Newman, and James Duggie

#### Conclusion

Transpacific Perspectives on Climate Action, Edward J. Blakely and Armando Carbonell

#### ABOUT THE EDITORS

Edward J. Blakely is honorary professor of urban policy at the United States Studies Centre at the University of Sydney, Australia. His web page is www.blakelycitytalk.com. Contact: ed@blakelyglobal.net

Armando Carbonell is chair of the Department of Planning and Urban Form at the Lincoln Institute of Land Policy. Contact: acarbonell@lincolninst.edu

# FELLOWSHIP programs

The Lincoln Institute offers a variety of fellowship programs to demonstrate its commitment to support scholars, practitioners, and graduate students at different stages of their academic and professional careers. These individuals contribute to the land and tax policy knowledge base and develop ideas to guide policy makers throughout the world.

For more information and application guidelines for all of the Institute's fellowship programs, visit the Web site at http://www.lincolninst.edu/education/ fellowships.asp.

# DAVID C. LINCOLN **FELLOWSHIPS**

The David C. Lincoln Fellowships in Land Value Taxation (LVT) were established in 1999 to develop academic and professional interest in this topic through support for major research projects. The fellowship program honors David C. Lincoln, former chairman of the Lincoln Foundation and founding chairman of the Lincoln Institute, and his longstanding interest in LVT. The program encourages scholars and practitioners to undertake new work in the basic theory of LVT and its applications. These research projects add to the knowledge and understanding of LVT as a component of contemporary fiscal systems in countries throughout the world.

Three researchers have been awarded fellowships for 2011-2012. The application deadline for 2012-2013 fellowships is September 1, 2012.

#### **David Albouv**

Assistant Professor, Department of Economics, University of Michigan **Urban Land Value: Measurement** and Theory

#### **Richard Almy**

Partner, Almy, Gloudemans, Jacobs & Denne, LaGrange, Illinois

A Global Compendium and Meta-Analysis of Property Tax Systems

#### **Shawn Rohlin**

Assistant Professor, Department of Economics, University of Akron, Ohio **Do Location-based Tax Incentives Improve Quality of Life and Quality of Business Environment?** 

## KINGSBURY BROWNE **FELLOWSHIP**

The Lincoln Institute established the Kingsbury Browne Fellowship in association with the Kingsbury Browne Conservation Leadership Award in 2006. That award honors Browne (1922–2005), a Lincoln Fellow in 1980, whose work led to the creation of the Land Trust Alliance (LTA). Now a national organization of about 1.800 land trust members, LTA trains thousands of conservation leaders, encourages the passage of legislation on land conservation, and develops standards and practices to professionalize and safeguard work on land trusts. This annual fellowship program, administered by the Lincoln Institute's Department of Planning and Urban Form, supports research, writing, and mentoring activities.

Audrey C. Rust, president emeritus of the Peninsula Open Space Trust (POST) based in Palo Alto, California, was named the most recent recipient of the combined fellowship and conservation leadership award in October at the Land Trust Alliance's Rally in Milwaukee, Wisconsin.

As executive director and then president of POST from 1987 to 2011, Rust partnered with public agencies and private landowners as the land trust protected more than 53,000 acres of open space lands in San Mateo, Santa Clara, and Santa Cruz counties. The Saving the Endangered Coast campaign, launched in 2001, is the largest land protection initiative ever completed by a local U.S. land trust.

She graduated from the University of Connecticut at Storrs with a B.A. in English and education. She has served on the boards of numerous local, state, and national organizations, primarily in the conservation and housing arenas, and she has received numerous awards for community service.

#### LINCOLN/LOEB FELLOWSHIP

The Loeb Fellowship was established in 1970 through the generosity of the late John L. Loeb, Harvard College '24. Based at the Graduate School of Design, the program offers ten annual post-professional awards for independent study at Harvard University. The fellowship is a unique opportunity to nurture the leadership potential of the most promising men and women in

design and other professions related to the built and natural environment. Each vear one fellow is selected to be the Lincoln/ Loeb Fellow and to work with the Lincoln Institute's Department of Planning and Urban Form.

Peter Park, trained as an architect and urban designer, is the planning director in Denver, Colorado. He previously served in a similar role in Milwaukee. He has presided over the development of a new form-based zoning ordinance for Denver and has also led extensive efforts to engage citizens in planning activities. During his fellowship, Park will research new methods for engaging citizens in the planning process and explore opportunities for replacing urban freeways with boulevards in city centers.

# PLANNING AND URBAN FORM **RESEARCH FELLOWSHIPS**

The Lincoln Institute's Department of Planning and Urban Form supports research fellowships to develop academic and professional interest in the relationship between the form of the built environment and the mosaic of open spaces across the landscape. The theme of large landscape conservation runs through several recent programs. The application deadline for 2012–2013 applications is March 15, 2012.

#### **Breece Robertson**

National Conservation Vision and GIS Director, Trust for Public Land, Santa Fe. New Mexico

#### **Jad Daly**

Climate Program Director, Trust for Public Land, Washington, DC **Brenda Faber** 

Foresite Inc. Consulting, Consultant to Trust for Public Land, Loveland, Colorado **Large Landscape Conservation** 

# C. LOWELL HARRISS **DISSERTATION FELLOWSHIP PROGRAM**

The Lincoln Institute's C. Lowell Harriss Dissertation Fellowship Program assists Ph.D. students, primarily at U.S. universities, whose research complements the Institute's interests in land and tax policy. This program honors Professor Harriss (1912–2009) who taught economics at Columbia University and was a long-time member of the Institute's Board of Directors.

# FELLOWSHIP programs

Administered through the departments of Valuation and Taxation and Planning and Urban Form, the program provides a link between the Institute's educational mission and its research objectives by supporting scholars early in their careers. The Institute hosts a seminar for the fellowship recipients each year so they can present their research and share feedback with other fellows and Institute faculty members. Dissertation fellowship applications for the next cycle are due by February 1, 2012. For guidelines and additional information, visit the Institute Web site at www.lincolninst.edu/education/ fellowships.asp

#### **II Hwan Chung**

Department of Public Administration, Maxwell School of Syracuse University School Finance Reform, School Choice, and Residential Sorting

#### **Lauren Coyle**

Department of Anthropology, University of Chicago **Dual Sovereignties in the Golden Twilight:** Law, Land and Labor in Ghana

#### William M. Doerner

Department of Economics. Florida State University **The Effects of House Prices** on Taxation and Property Valuation

#### **George Homsy**

Department of City and Regional Planning, Cornell University Sustainability in the Small City: **Exploring Climate Change Innovation** in Local Land Use Policy

#### Olha Krupa

School of Public and Environmental Affairs, Indiana University **An Analysis of Indiana Property Tax Reform: Equity and Cost Considerations** 

## **Lauren Lambie-Hanson**

Department of Urban Studies and Planning, Massachusetts Institute of Technology Foreclosure Resolution: Efficiency and **Impacts of Asset Disposition** 

#### **Amy Lynch**

Department of City and Regional Planning, University of Pennsylvania Is it Good to be Green?: An Assessment

of County Green Infrastructure Planning In Colorado, Florida, and Maryland

#### **Christopher Palmer**

Department of Economics, Massachusetts Institute of Technology What's In a Neighborhood? The Local Effects of Housing Policy

IN MEMORIAM

# RONALD L. SMITH

ormer Lincoln Institute president Ronald L. Smith passed away on December 3, 2011 after a lengthy illness. He had served the Institute from 1986 to 1996.

"Ron led the Lincoln Institute at a time of transition," noted Kathryn J. Lincoln, chairman of the Institute Board of Directors and chief investment officer. "The Institute had built an enviable reputation in terms of its land policy work, but lacked a good organizational structure. Ron helped guide the process with the Board and staff to



create a world-class operation. He hired and promoted key staff, purchased 113 Brattle Street in Cambridge, and renovated the building for our offices and classrooms. Ron created a collegial work environment at the Institute, and after his retirement he continued to be a great fan and a regular participant at seminars and other events."

Ron Smith grew up in Indiana and earned his bachelors degree in mechanical engineering from General Motors Institute (GMI). He received his M.S. in industrial relations and his Ph.D. in organization psychology and communication from Purdue University. He returned to GMI in 1963 and headed the Department of Communications and Organizational Behavior. He subsequently served as dean of the College of Business Administration at the University of Nebraska in Lincoln from 1973 to 1977, and then as professor of management and dean of the McDonough School of Business at Georgetown University from 1977 to 1986.

Among Ron Smith's legacies at the Lincoln Institute is the Ronald L. Smith Public Officials Fellowship Award, which recognizes his support for the participation of elected or appointed public officials in the Institute's educational programs. The current Ronald Smith Fellow is Peter Pollock, FAICP, former planning director of Boulder, Colorado, who manages joint programs between the Department of Planning and Urban Form and its partners in the Intermountain West.

Ron is survived by his wife Betty, three children, eight grandchildren, and many friends and colleagues.

#### **Caroline Weber**

Department of Economics, University of Michigan **Three Essays in Taxation** 

# INTERNATIONAL **GRADUATE STUDENT FELLOWSHIP PROGRAMS**

he Lincoln Institute's Program on Latin America and the Caribbean offers fellowships to doctoral and masters candidates in the region. The application deadline for 2012-2013 fellowships in Latin America will be announced on the Institute's Web site in the spring of 2012. For more information, contact lac@lincolninst.edu.

Through the Peking University-Lincoln Institute Center for Urban Development

and Land Policy, the Institute's China Program awards fellowships to masters and doctoral students residing in and studying land and tax policy in the People's Republic of China. Candidates participate in a workshop in China to present their proposals and receive comments from an international panel of experts. Awardees reconvene after one year to present their findings and receive further critiques from experts in land and tax policy. The next application deadline is April 15, 2012. For more information, see the Peking-Lincoln Center Web site at http://plc.pku.edu.cn.

The international students awarded fellowships in 2011–2012 are announced in the Institute's Program catalog and on the Web site.

# working papers

ore than 730 working papers are currently available, including the results of Institutesponsored research, course-related materials, and occasional reports or papers cosponsored with other organizations. Some papers by associates affiliated with the Institute's Latin America and China programs are also available in Spanish, Portuguese, or Chinese. Listed below are the papers that have been posted since June 2011 at www.lincolninst.edu/pubs.

#### **United States**

Donald Boyd

Recession, Recovery, and State and Local Finances

Peter W. Culp and Jocelyn A. Gibbon Strategies for Renewable Energy Projects on Arizona's State Trust Lands

Susan Culp, Alison Berry, and Joe Marlow

Cash for Conservation: Payments for Ecosystem Services through Compensatory Mitigation on State Trust Lands in Arizona, Colorado, and Montana

Susan Culp and Dan Hunting

An Analysis of Contributory Value on Trust Lands in the West

Russell Kashian and Mark Skidmore

**A Duration Analysis of Tax Increment Finance** District Lifespans: The Case of Wisconsin

Lynn Scarlett

America's Working Lands: Farm Bill **Programs and Landscape-Scale Conservation** 

Jeffrey O. Sundberg

**State Income Tax Credits for Conservation Easements: Do Additional Credits Create** Additional Value?

#### **Latin America**

Durfari Janive Velandia Naranjo and Oscar Sanora Quintero

Efectos de la política de redensificación en los precios del suelo: El caso del Bando2 en la Ciudad de México

(also available in English)

Effects of Urban Density Regulation on Land Prices: The Case of Bando2 in Mexico City

Martím Smolka and Ciro Biderman

Vivienda informal: Una perspectiva de economista sobre el planeamiento urbano (also available in English)

Housing Informality: An Economist's Perspective on Urban Planning

# PROGRAM calendar

The education programs listed here are offered as open enrollment courses for diverse audiences of elected and appointed officials, policy advisers and analysts, taxation and assessing officers, planning and development practitioners, business and community leaders, scholars and advanced students, and concerned citizens.

For more information about these and other programs, visit the Lincoln Institute Web site at www.lincolninst.edu/education/courses.asp. In addition, the Web site hosts many online courses on land use and taxation policy that are offered in both English and Spanish. Lectures offered as part of the spring series at Lincoln House in Cambridge, Massachusetts, will also be announced on the Web site as the schedule is finalized.

# **Program in the United States**

TUESDAY-WEDNESDAY, MARCH 6-7

Phoenix, Arizona

**Responding to Change and Uncertainty in the Western United States: Managing Risk in Decision Making** 

Stephen Aldrich, Bio Economic Research Associates, LLC (bio-era), Vermont; Jim Holway, Western Lands and Communities, Phoenix; and Joe Marlow, Sonoran Institute, Phoenix

Western Lands and Communities, a joint venture of the Lincoln Institute of Land Policy and the Sonoran Institute, is collaborating with the Consensus Building Institute to host a workshop on using scenarios to manage for uncertainty and change. The course will examine drivers of change in the West, including climate, the economy, and demographics, and provide participants a basic understanding of scenario planning and other techniques used to assess the impacts of change and uncertainty. Participants will also take part in a simulated role-play where they will learn how to use those tools to improve planning and decision making.

#### **Program in Latin America**

THURSDAY-FRIDAY, APRIL 19-20

Bogotá, Colombia

90th Anniversary of the Betterment Contribution Law in Colombia: Evaluation and Proposals

Martim Smolka, Lincoln Institute of Land Policy; Oscar Borrero, Los Andes University and National University of Colombia, Bogotá; and Christian Mora and Alejandro Ordoñez, Institute of Studies of the Office of the General Attorney of the Nation, Colombia

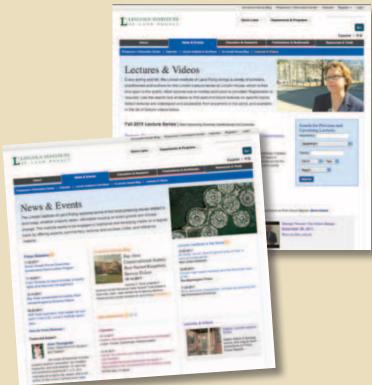
This forum takes place on the occasion of the 90th anniversary of the betterment contribution law in Colombia—Contribución de Valorización, Law 25 of 1921. The program will evaluate the technical and legal experiences in the use of this instrument, which has been widely accepted by Colombian citizens and constitutes the oldest Latin American experience in value capture legislation. In addition, the forum will examine international experiences that potentially can be useful in improving the Colombian model. The forum is expected to produce a reform proposal to update the law to the twenty-first century and to better regulate its interpretations, as reflected in the technical models used to allocate the levy.

# What's New on the Web

# **Our new look**

offers streamlined navigation for enhanced user experience





You may have noticed that the Lincoln Institute's

Web site homepage has been redesigned to allow quicker access to recent news, publications, and other products. The streamlined navigation for enhanced user experience and the redesigned pages are being powered by a new content management system that facilitates continual updating.

The new homepage features include:

- A rotating carousel of the latest books, policy focus reports, videos, and free online databases
- A one-stop corner for downloading Land Lines, working papers, information on fellowships and RFPs, and the annual Program catalog
- The latest posts on the "At Lincoln House" blog
- The latest citations in "Lincoln Institute in the News"
- · One-click access to pages in Spanish and Chinese
- Quick Links to the "Lectures & Videos" landing page, hosting a growing library of original short videos and videotaped lectures
- Connections to Twitter, Facebook, LinkedIn, and YouTube

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# **2012 Publications Catalog**

The Lincoln Institute's 2012 Publications catalog features more than 100 books, policy focus reports, and multimedia resources. These publications represent the work of Institute faculty, fellows, and associates who are researching and reporting on the following topics: property taxation, valuation, and assessment; urban and regional planning; smart growth; land conservation; housing and urban development; and other land policy concerns in the United States, Latin America, China, Europe, Africa, and other areas around the globe.

All of the books, reports, and other items listed in the catalog are available to purchase and/or download on the Institute's Web site. The entire catalog will be posted for free downloading in February. To request a printed copy of the catalog, send your complete mailing address to <code>help@lincolninst.edu</code>.



www.lincolninst.edu