Zombie Subdivisions | Detroit | Foreclosures | Residential Wealth Distribution in Rio

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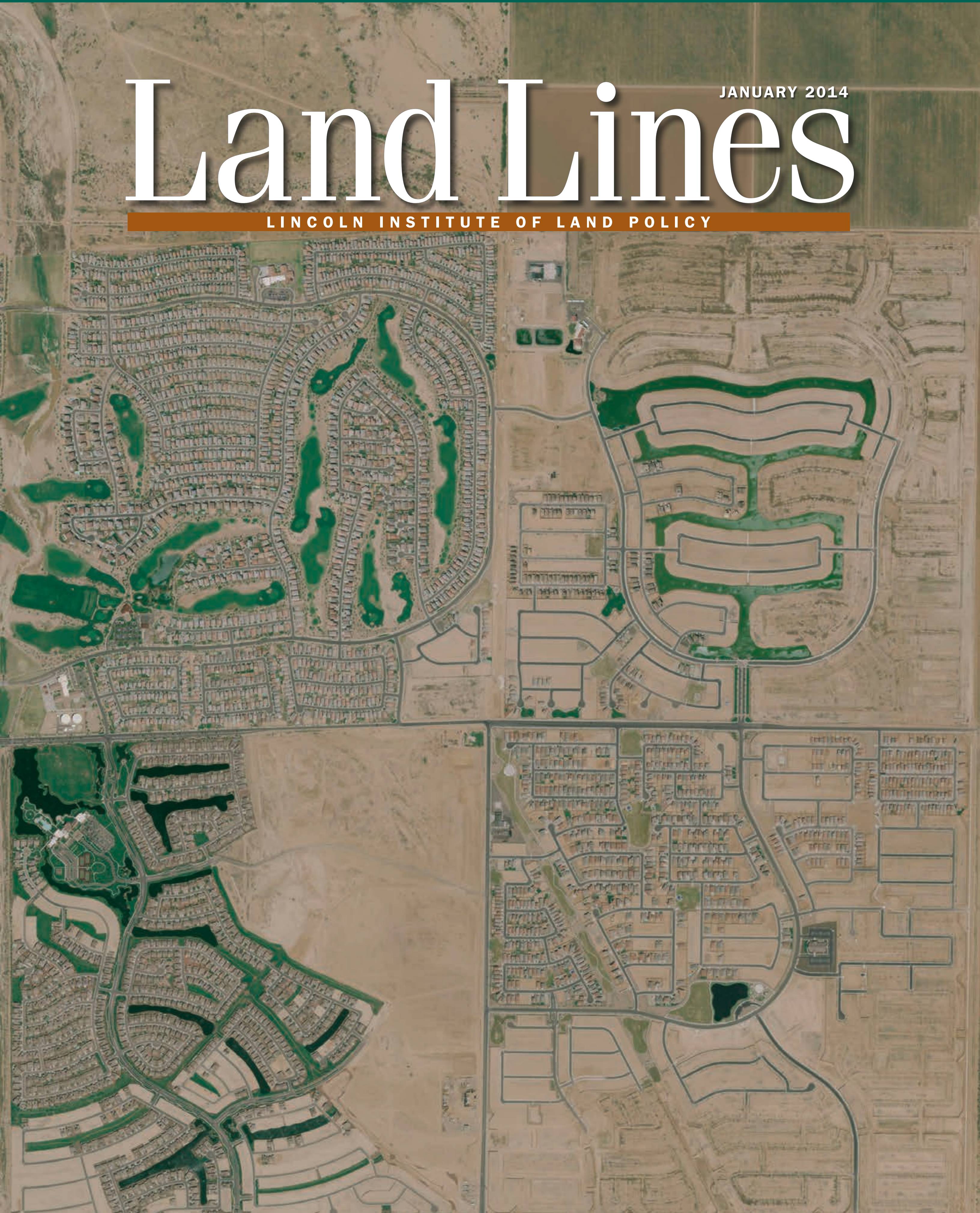

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JANUARY 2014 • VOLUME 26, NUMBER 1

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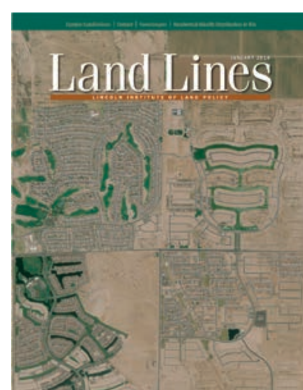

An aerial photograph of the landscape about 20 miles from the urbanizing edge of the Phoenix metropolitan area (see p. 4).

© Landiscor Aerial Information

Resolving Land Use Disputes

Gregory K. Ingram

With more than 25,000 local governments in the United States involved in the review and approval of proposed changes in zoning, planning, and property development, the number of local land use decisions made annually likely runs into the millions. While the vast majority of such determinations proceed in a routine fashion, more complex and contentious changes in land use and zoning frequently involve lengthy and acrimonious conflicts. Excess development entitlements in the Intermountain West (p. 4) exemplify such a challenging land use issue.

Land use and real estate development disputes are ranked among the most common types of civil disagreements in the United States, and they generally include multiple parties, properties, and interests. These contests produce costs for all parties directly involved as well as for the public more generally. Yet long experience with the resolution of land use disputes indicates that changes in the land use decision-making process can produce better outcomes at lower cost.

Local governments normally have a board charged with making decisions about changes in land use, and such boards employ a four-step process. First, the party seeking a change or permission to develop a property files an application with the board. Second, the board reviews the submission and may seek responses or modifications from the applicant. Third, there is an opportunity for public comment, which may lead to an additional dialog between the board and the applicant and further modifications in the application. Finally, the board renders a decision. This process works well for the majority of applications that are processed reasonably quickly. However, most of the board's time is spent on the minority of cases that involve many interests and numerous rights that can be overlapping, contradictory, or imprecise.

The typical four-step process focuses on adjudicating rights; when the issues are few and simple, and the rights are well defined for the properties in question, this method works well. For more complex cases, however, an expanded approach that focuses on mutual gains for all concerned parties is more promising. The mutual gains approach is most productive when: there are many interested stakeholders; the deciding board has some discretion in the particular decision; the impacts of the decision are long-term and far-reaching; and a non-collaborative outcome is likely to be challenged by one or more of the involved stakeholders. The mutual gains approach should not be viewed as an alternative to the usual four-step process but as an expansion of it—essentially through the addition of extra steps or the expansion of existing steps in the standard procedure.

The key to successful use of the mutual gains approach is to discover stakeholders' underlying interests—behind their publicly announced positions—and then to develop new options or solutions that are responsive to those interests. It is ideal if this step occurs early in the process when positions are still flexible.

This process of investigation and discovery is an element of the first stage of the mutual gains approach, which involves identifying the stakeholders, listening carefully to their concerns, and building on their interests. In the usual four-step process, this would likely occur in a pre-application phase addressing development and design concepts before final proposals are formulated. The second stage of the mutual gains approach is to design a process for collaboration that involves all stakeholders and offers opportunities for them to share information and learn from each other. The third stage is to promote successful deliberation among the stakeholders—typically by using a good facilitator who can build relationships and trust among those involved. The final stage is to implement the agreements that have been forged, ensuring that the proposed solutions incorporate the accords reached by the participants while also meeting the requirements of the decision-making board.

A much more detailed description of the mutual gains approach, along with informative case studies, is available in the recent Lincoln Institute book, *Land in Conflict*, authored by Sean Nolon, Ona Ferguson, and Pat Field. This title is available in both print and ebook formats.

Faculty Profile

Mark Skidmore is professor of economics at Michigan State University, where he holds the Morris Chair in State and Local Government Finance and Policy, with joint appointments in the department of agricultural, food and resource economics and the department of economics. He received his doctorate in economics from the University of Colorado in 1994, and his bachelor's degree in economics from the University of Washington in 1987. He serves as coeditor of the Journal of Urban Affairs.

Professor Skidmore's research has focused on public economics and urban/regional economics. Current research interests include state and local government tax policy, intergovernmental relations, the interrelationship between public sector decisions and economic activity, and the economics of natural disasters. His work has been funded by the Fulbright Program, the Lincoln Institute of Land Policy, the National Science Foundation, the Urban Institute, and USAID.

His articles have appeared in journals such as Economic Inquiry, Economics Letters, Journal of Urban Economics, Kyklos, Land Economics, National Tax Journal, Public Choice, Regional Science and Urban Economics, *and the* Southern Economic Journal. *His research also has been cited in prominent news outlets such as the BBC,* China Post, The Economist, *Europe Intelligence Wire,* Forbes, International Herald Tribune, Los Angeles Business Journal, *MSNBC,* Newsweek, The New Yorker, The New York Times, *and PBS News Hour.*

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Mark Skidmore

LAND LINES: *This year, you are a Visiting Fellow at the Lincoln Institute. What issues are you working on?*

MARK SKIDMORE: About two years ago, my colleague Gary Sands and I were invited by City of Detroit Councilman Kenneth Cockrel to evaluate Detroit's ailing property tax environment. Councilman Cockrel wondered what gains might result if Detroit were to shift to a land-based tax. We were given access to detailed data for more than 400,000 property parcels within the city, in order to conduct an evaluation, and we are grateful for the Institute's support to pursue that project. Our report identified significant erosion of the property tax base and explored options for expanding the base, including a shift to a land-based tax. Our evaluation showed that a land-based tax would serve to broaden the tax base but also would produce substantial shifts in the tax burdens of residential, commercial, and industrial property owners.

In 2013, Detroit's fiscal challenges came to a head when Governor Rick Snyder appointed an emergency financial manager who subsequently set in motion a filing for bankruptcy. On December 3, 2013, Judge Rhodes ruled that the City of Detroit is eligible for Chapter 9 bankruptcy protection. Despite the near-complete collapse of the real estate market within the city during the Great Recession, the property tax remains an important revenue source, and its administration can help or hinder economic and fiscal recovery. This year, I plan to use the parcel-level data set to examine important issues such as tax delinquency, the over-assessment of property, the value of vacant land, and policies related to transfer of property ownership from the private sector to the public sector due to tax foreclosure, and transfers back to the private sector.

LAND LINES: *What are some of the underlying factors behind Detroit's current problems?*

MARK SKIDMORE: About 48 percent of Detroit property owners are delinquent on their tax bills, a fact that reflects the erosion of the social contract between citizens and the city. This extraordinarily high delinquency rate is the result of a confluence of factors. First, the city has failed to enforce tax compliance, particularly for low-valued properties. Second, many citizens perceive the tax to be unfair because of the over-assessment of their property. Finally, anecdotal evidence suggests citizens are not paying taxes because local authorities are failing to provide basic public services such as street lighting, snow plowing, and public safety.

One key cause of the high delinquency rate is the over-assessment of property for tax purposes. The real estate crisis hit Detroit particularly hard. In 2010, the average selling price of a residential parcel with a structure was less than $10,000, yet the average assessed value of such properties for tax purposes was $54,000. According to state guidelines, the ratio of assessed value to sales price should be close to one. In September 2013, city officials announced that over the next three to five years all properties within the city would be reassessed.

Second, Detroit has a history of tearing down dilapidated tax-foreclosed structures. As a result, it is one of the few large cities in the United States with frequent sales of vacant land. The value of vacant land is often difficult to ascertain in highly urbanized areas, but accurate valuations are essential if one wants to impose a land tax or a two-tier tax on land and structures. The large number of sales transactions of vacant land in Detroit provides an opportunity to estimate land value. Interestingly, the average value of an unimproved parcel in 2010 based on sales data was $34,000—much higher than the average price of residential parcels with structures, which, as mentioned, was less than $10,000.

The city government now owns and manages more than 25 percent of the city's land area, and public ownership continues to grow because tax foreclosures have outpaced the transfer of publicly owned parcels back into private hands. Some of the questions I am investigating are: What are the appropriate policies in a market-oriented society for managing low-valued urban land transactions? Why is the delinquency rate so high, and what can be done to improve property tax compliance in the context of a nearly collapsed urban real estate market? What role does the perception of "unfair" assessments play in tax delinquency?

LAND LINES: *What is the long-term prognosis for Detroit?*

MARK SKIDMORE: The city's fiscal challenges are a symptom of deep underlying issues. Whether one considers the redevelopment of a declining urban area or reconstruction in the wake of a major natural disaster, the most important elements in any recovery are human capital and social/cultural attributes. If one accepts the premise that they are essential building blocks for redevelopment, and if these elements are lacking, then a top priority is to consider policies and actions that can develop them. In 2011, the high school graduation rate in Detroit was 62 percent. The percentage of households headed by a single parent was 62 percent. By some measures, the functional literacy rate among adults is just 53 percent. It is difficult to build a dynamic and robust urban economy upon such a weak foundation.

Clearly, policy makers must address the immediate fiscal challenges, but the longer-term prognosis for Detroit will depend on actions aimed at improving the underlying economic base—human and social capital. Without addressing these deep challenges, Detroit will continue to flounder. There is no quick fix. In order for Detroit to have a chance to prosper once again, Michigan needs to make a long-term commitment to improving these underlying conditions.

LAND LINES: *Is Detroit a harbinger for other U.S. cities?*

MARK SKIDMORE: Yes and no. A number of other local governments face significant fiscal challenges—Chicago, Jacksonville, Los Angeles, Oakland, and Providence, to name a few. Underfunded retiree compensation promises are often cited as a major issue. Yet, many of these cities stand a reasonable chance of re-emerging and potentially prospering in the not-too-distant future because they suffer from acute crises brought on by the recession, but not necessarily from chronic fiscal challenges. However, cities with chronic challenges due to significant deficits in social and human capital can look to Detroit as an indicator of their future. My hope is that state and local policy makers from around the country can learn from the Detroit experience and begin making the necessary long-term investments in their most important asset—people, particularly children—so they can avoid the chronic economic and fiscal challenges seen in Detroit.

LAND LINES: *How does the Detroit project fit into your larger research agenda?*

MARK SKIDMORE: Much of my research has addressed the interrelationship between public decision making and economic activity. Over the years, I have examined issues such as the effectiveness of tax increment finance, the implications of imposing impact fees to cover the infrastructure costs associated with development, and the effects on development of property taxation, tax abatements, and other subsidies. I have also considered other public finance issues such as state lotteries, sales taxes, and income taxation. I am particularly interested in the spatial-dynamic-competitive relationships between adjacent and overlying taxing jurisdictions.

LAND LINES: *Much of your research has focused on government policy and finance in the United States. What other work have you done internationally?*

MARK SKIDMORE: In recent years, I have partnered with my MSU colleagues on a USAID-funded grant in Mali. My role has been to consider how Mali's recently decentralized governmental system can be utilized more effectively in food security and land use management. Climate change is affecting Mali in very tangible ways—as the land in the north has become more arid, there has been significant migration to areas in the south, which has better access to water. This migration is resulting in increased violence due to ineffective land tenure and property rights. Now that democratic rule has been re-established, we are again working with our Malian partners to develop systems that involve local authorities in managing food security, land access, property rights, and land-related conflicts. Interestingly, the issue of what to do with all the publicly owned land in Detroit has informed our work in Mali, and vice versa.

I also have ongoing research in the economics of natural disasters. One of my recently published articles (with coauthor Hideki Toya) used thousands of disaster events from all over the world to show that countries with more decentralized governmental systems have significantly fewer disaster-induced fatalities. Our research provides evidence that decentralized governments provide essential services more effectively than more centralized systems.

A third recently completed project shows that societal trust tends to increase in countries in the years following climatic disasters. The relationship we observe is robust, and we hypothesize that such disasters require and provide opportunities for people to work across social classes to address their challenges, thus building trust and social capital. While natural disasters can have devastating human and economic impacts, a potential spillover benefit of greater disaster exposure may be a more tightly knit society.

LAND LINES: *How does your research reflect the interests and values of the Lincoln Institute?*

MARK SKIDMORE: The Lincoln Institute is recognized worldwide as a leading organization concerning the use, regulation, and taxation of land—property taxation, tax abatements, economic development policies, decentralized fiscal systems—and all of these are topics of my research. Over the years, the Institute has supported my work on Wisconsin tax increment finance, Michigan local government fiscal stress, and my ongoing evaluation of the Detroit property tax environment. The U.S. system of national and largely autonomous subnational governments provides fertile ground for researchers to study and learn about which policy "experiments" lead to better, or worse, outcomes. I really love doing this work and am thankful to have the Institute as a partner.

Combating Zombie Subdivisions

How Three Communities Redressed Excess Development Entitlements

© Anne Ellis

Vacant, platted lots are a common sight in the Intermountain West, where in many counties empty subdivision parcels range from 15 percent to two-thirds of all lots.

Jim Holway with Don Elliott and Anna Trentadue

Excess development entitlements and distressed subdivisions are impairing the quality of life, skewing development patterns and real estate markets, damaging ecosystems, and diminishing fiscal health in communities throughout the U.S. Intermountain West. Since the post-2007 real estate bust, which hit many parts of the region severely, eroding subdivision roads now carve up agricultural lands, and lonely "spec" houses continue to dot many rural and suburban landscapes. Some are vacant, but others are partially occupied and require the delivery of public services to remote neighborhoods that generate very little tax revenue. In jurisdictions where lots could be sold before infrastructure was completed, many people now find themselves owning a parcel in what was supposed to be a high-amenity development but is in fact little more than a paper plat.

These arrested developments—known colloquially as "zombie" subdivisions—are the living dead of the real estate market. Beset by financial or legal challenges, once-promising projects are now afflicting their environs with health and safety hazards, blight, decreased property values, threats to municipal finance, overcommitted natural resources, fragmented development patterns, and other distortions in local real estate markets.

This article presents an overview of the economic context that fostered so many excess entitlements in the West and of the local planning and development controls that influence how those market forces play out in a given community. It also describes how three communities in the Intermountain West have redesigned distressed subdivisions in their jurisdictions and how those efforts are facilitating recovery, creating more sustainable growth scenarios, improving property values, and conserving land and wildlife habitat.

The Economic Background that Fostered Excess Development in the West

In the Intermountain West, where land is abundant, and rapid growth is common, it's not unusual for local governments to grant development entitlements well in advance of market demand for housing. Boom and bust cycles aren't rare in the region either. The magnitude of the Great Recession, however, amplified the frequency of excess entitlements and exacerbated their harmfulness to surrounding communities. In the Intermountain West alone, millions of vacant lots are entitled. Across a large number of the region's counties, the rate of vacant subdivision parcels ranges from around 15 percent to two-thirds of all lots (tables 1 and 2).

As the economy continues to recover, will the market correct this surplus of development rights, incentivizing developers to build out distressed subdivisions or to redesign those that do not reflect current market demand? In some locations, yes; in others, it is unlikely. Subdivisions are designed to be near-permanent divisions of land. Although many areas throughout the Intermountain West are rebounding robustly, many subdivisions remain distressed, with expired development assurances, few if any residents, fragmented ownership, partially completed or deteriorating infrastructure improvements, and weak or nonexistent mechanisms to maintain new services. Uncorrected, these arrested developments will continue to debilitate the fiscal health and quality of life in affected areas.

TABLE 1
Selected Colorado Counties—Vacant Subdivision Lots in 2012
(includes incorporated and unincorporated areas)

County	Number of Subdivisions	Parcels in Subdivisions	Developed Parcels in Subdivisions	Undeveloped Parcels in Subdivisions	Percent Undeveloped
Douglas	548	59,904	51,258	8,646	14%
Eagle	1,434	19,363	13,296	6,067	31%
Garfield	822	17,271	14,388	2,883	17%
Mesa	2,900	52,871	46,478	6,393	12%
Montrose	2,570	15,945	11,713	4,232	27%

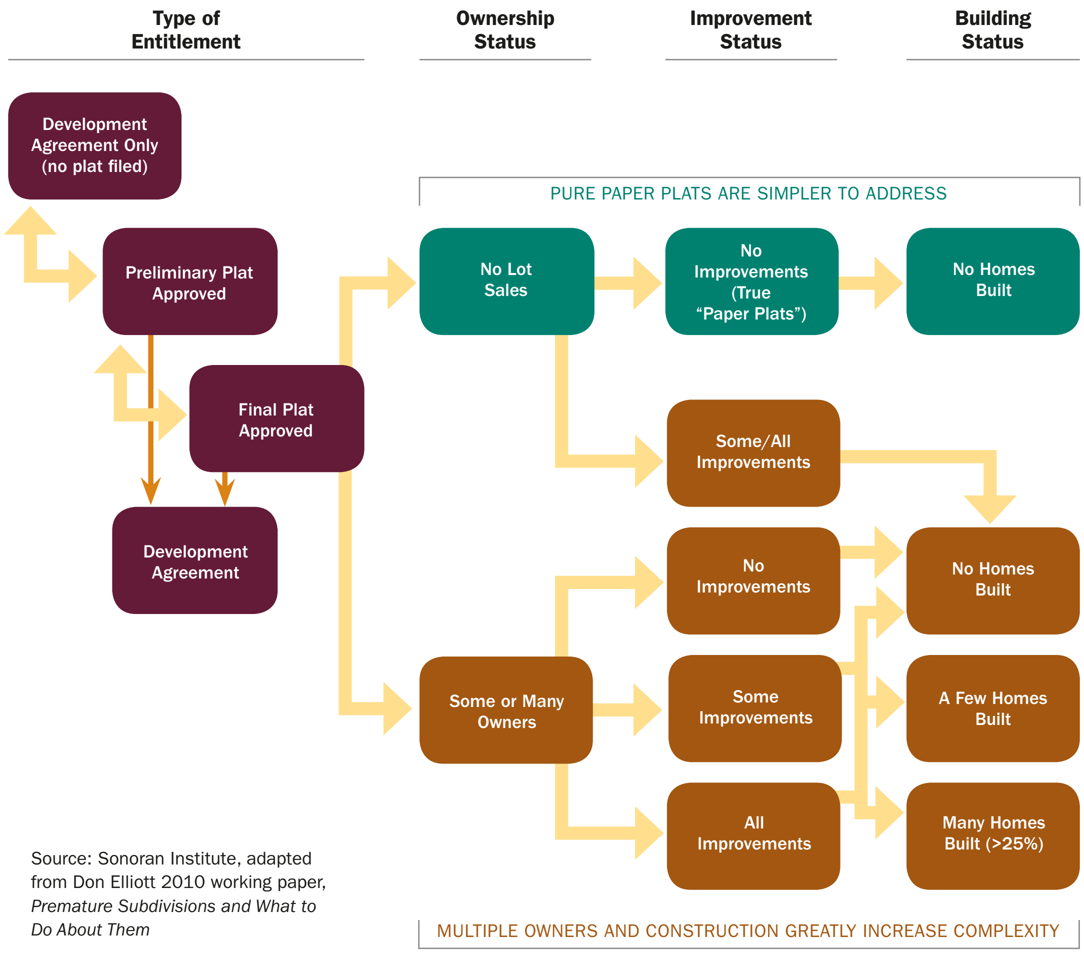
Source: Sonoran Institute

TABLE 2
Selected Northern Intermountain West Counties—Vacant Subdivision Lots in 2012

County, State	2000–2010 Growth	2010 Population	Number of Subdivisions	Parcels in Subdivisions	Developed Parcels in Subdivisions	Undeveloped Parcels in Subdivisions	Percent Undeveloped
Ada County, ID	30.40	392,365	5,460	151,319	127,451	23,868	16%
Jefferson County, ID	36.50	26,140	321	6,331	2,939	3,392	54%
Teton County, ID	69.50	10,170	403	10,225	3,300	6,925	68%
Lake County, MT	8.45	28,746	540	12,583	4,356	8,227	65%
Missoula County, MT	14.09	109,299	1,876	32,470	27,028	5,442	17%
Yellowstone County, MT	14.39	147,972	1,946	82,173	46,396	35,777	44%
Laramie County, WY	12.4	91,738	1,378	36,134	28,681	7,453	21%
Lincoln County, WY	24.2	18,106	367	5,663	2,356	3,307	58%
Sheridan County, WY	9.6	29,116	314	3,912	2,601	1,311	34%

Source: Sonoran Institute

FIGURE 1
Land Subdivision Process



Source: Sonoran Institute, adapted from Don Elliott 2010 working paper, *Premature Subdivisions and What to Do About Them*

Source: Sonoran Institute, adapted from Don Elliott 2010 working paper, Premature Subdivisions and What to Do About Them

The Complexity of Revising Development Entitlements

Local jurisdictions shape the future of their communities through the entitlement of land, the approval of subdivisions, and the granting of subsequent development permits. These actions result in land use commitments that prove difficult to change in the future, establish development standards, and often commit the community to significant, long-term service costs.

Figure 1 demonstrates that excess entitlements are easiest to address when they're purely paper subdivisions—with one owner, no improvements, no lots sold, and no houses built. As the status of a subdivision progresses from a paper plat to a partially built development—and more than a few landowners are involved, or the subdivider has begun to install improvements, or more than a few owners have built homes—the challenges grow more complex, and the options for resolving them more constrained.

The revision or revocation of a paper plat requires the agreement of only a single property owner who hasn't made any major investments that might constrain the ability to alter design plans, allowing for the simplest resolutions (though the situation becomes more complicated if a lender must also approve any changes). The sale of even one lot to an individual landowner makes entitlement issues in the subdivision harder to resolve for three major legal reasons: (1) the need to protect the property rights of lot owners, (2) the need to preserve access to sold lots, and (3) pressure for equal treatment between current and potential future homeowners. Some of these issues can give rise to lawsuits, creating potential liability for the town or county. The revision or revocation of a plat with sold lots will require the agreement of multiple owners—each of whom may decide to file a lawsuit on one or more of these grounds.

Once the developer makes significant investments for infrastructure and other improvements, complications escalate. Although the purchase of land does not in itself create a "vested right" to complete the development, once an owner invests in improvements to serve anticipated houses, it is difficult to stop construction of those homes without reimbursing the developer for the cost of infrastructure.

Completed homes—particularly if a number of them are already occupied—further compound the complexity of resolving distressed subdivisions. Access roads will need to be retained and maintained, even if the homes are widely scattered in inefficient patterns. If the developer committed to building a golf course, park, or other community facilities, individual lot owners could claim a right to those amenities—whether or not they have been built, and whether or not the associations slated to upkeep them exist or have enough members to perform the maintenance. Even if the developer was clearly responsible for constructing the amenities, the local government could become liable for them if it has prevented the developer from building the amenities by vacating parts of the plat where those amenities were to be built.

Larger subdivisions split into several phases at various stages of completion pose the most intricate and extensive challenges. The first phases of construction may be mostly sold lots with most infrastructure in place, but later phases may be mere paper plats—unbuilt, with no lots sold and no improvements in place. Thus, a single distressed subdivision may pose several types of legal entitlement issues, with varying levels of risk and potential liability, in different corners of the development.

How Three Communities Successfully Redesigned Excess Entitlements

Local governments seeking to remedy the potential negative impacts of excess development entitlements and distressed subdivisions have many different land use and zoning measures at their disposal. We identified 48 tools and 12 best practices as a result of our research, which draws on case studies, lessons shared by experts during several workshops, data analysis, and a survey of planners, developers, and landowners in the Intermountain West. (For the scope of preventive and treatment strategies, consult the full Policy Focus Report, *Arrested Developments: Combating Zombie Subdivisions and Other Excess Entitlements*, p. 30). Generally, they fall into four

Distressed subdivisions are hardest to treat once construction begins.

© Maricopa County Planning and Development Department

© Sonoran Institute

Signs of trouble: deteriorating billboards advertise a forsaken development project in Mesa County, Colorado

categories: economic incentives, purchase of land or development rights, growth management programs, and development regulations:

1. **Economic incentives**—such as targeted infrastructure investments, fee waivers, and regulatory streamlining—avoid controversial regulations.
2. **Purchase of land or development rights** is the most direct way to eliminate unwanted development entitlements, but it may be too costly for some communities.
3. **Growth management approaches** include relying on urban service area boundaries or adequate public facility requirements to limit new development entitlements.
4. **Development regulations** include rezoning, changes in subdivision ordinances and development assurances, initiation of plat vacating processes, and revised development agreement templates.

The following three case study communities primarily utilized development regulations. Mesa County in Colorado and Teton County in Idaho revised their development agreements to redesign local distressed subdivisions. All three jurisdictions, including the city of Maricopa in Arizona, facilitated voluntary replatting efforts as well.

How Mesa County, Colorado, Revised Its Development Approval Process and Abandoned Paper Plats

During the oil shale boom and bust of the 1980s, Mesa County, Colorado, was one of the regions hit hardest. When ExxonMobil ceased operations in the area, the population of Grand Junction, the county seat, plummeted by 15,000 people overnight. All development halted. In the bust's wake, more than 400 subdivisions, encompassing about 4,000 lots throughout the county, were abandoned. Nearly 20 percent of Mesa County's subdivisions were left with unfulfilled development improvement agreements.

When the county's bond rating dropped in 1988, it put several measures in place to clean up the excess entitlements. It negotiated with local banks and the development community to establish a development improvements agreement form and procedure. It also established a new financial guarantee called the "Subdivision Disbursement Agreement" between construction lenders and the county. The agreement puts the county in a direct partnership with financial institutions to ensure, 1) an agreed-upon construction budget, 2) an established timeline for construction of the improvements, 3) an agreed-upon process, involving field inspections during construction, for releasing loan funds to developers, and 4) the county's commitment to accept a developer's improvements, after certain conditions have been met, and to release the developer from the financial security.

It took Mesa County 15 years to fully address the excess entitlements stemming from the 1980s bust, but the work paid off: During the Great Recession, the county had the lowest ratio of vacant subdivision parcels to total subdivision lots among approximately 50 counties examined in the Intermountain West. Not a single developer backed out of a development agreement when only partial improvements were made. While some subdivisions remain vacant, all improvements have been completed to the point that the parcels will be ready for construction once they are sold.

River Canyon (figure 2), for example, was planned as a 38-lot subdivision on 192 acres. When the real estate bubble burst in 2008, the entire site had been lightly graded with roads cut, but no other improvements were complete, and no parcels had been sold. Realizing the lots would not be viable in the near-term, the developer worked with the county to replat the subdivision into one parent lot until the owner is ready to apply for subdivision review again.

The resolution is a win-win: The county escapes a contract with a developer in default and avoids the sale of lots to multiple owners with whom it would be difficult to coordinate construction of subdivision improvements. The developer avoids the cost of installing services and paying taxes on vacant property zoned for residential development.

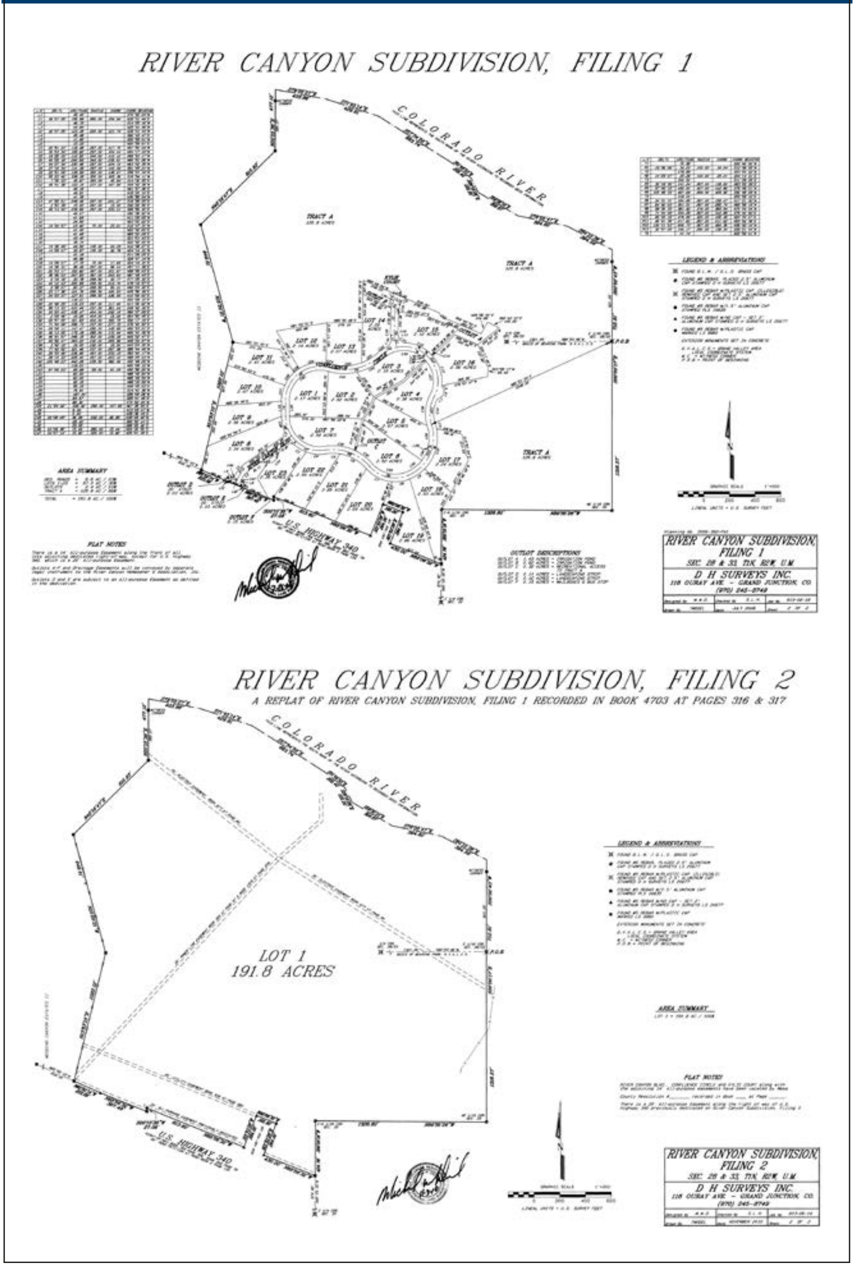
Now, lenders in Mesa County often encourage the consolidation of platted lots, because many banks will not lend money or extend the time on construction loans without a certain percentage of presales validating the asset as a solid investment. The landowner generally complies as well, to avoid paying taxes on vacant residential property, which carries the second highest tax rate in Colorado. If market demand picks up, property owners may submit the same subdivision plans to the county for review, to ensure compliance with current regulations. If the plans still comply, the developer can proceed from that point in the subdivision process. Mesa County consolidated parcels this way a total of seven times from 2008 to 2012, to eliminate lots where no residential construction is anticipated in the near future.

How Maricopa, Arizona, Partnered to Convert Distressed Parcels to Nonresidential Uses

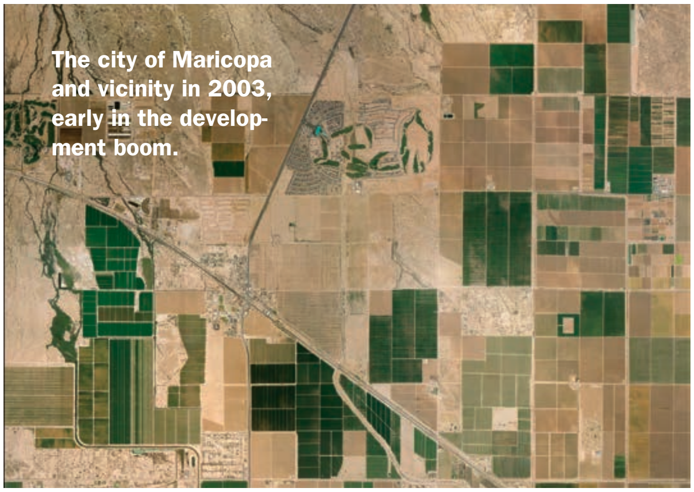
Maricopa—incorporated in 2003, in the early years of Arizona's real estate boom—is typical of many new exurban communities within growing metropolitan regions. Faced with an influx of new residents "driving until they qualified," the community quickly committed the majority of available land to residential subdivision entitlements. At the height of the boom, the small city—37 miles from downtown Phoenix and 20 miles from the urbanizing edge of the Phoenix metro area—was issuing roughly 600 residential building permits per month.

Pinal County had approved many of Maricopa's residential subdivisions before the city was incorporated, in accordance with the county's 1967 zoning code. In fact, following standard practice for newly incorporated communities, the city initially adopted the Pinal County Zoning Ordinance. For a time, the county planning and zoning commission also continued to serve as the city's planning oversight body. But this older rural county code did not consider or create incentives for mixed-use development, areas with a downtown character, a balance between jobs and housing, institutional uses, or social services. The lack of diversity

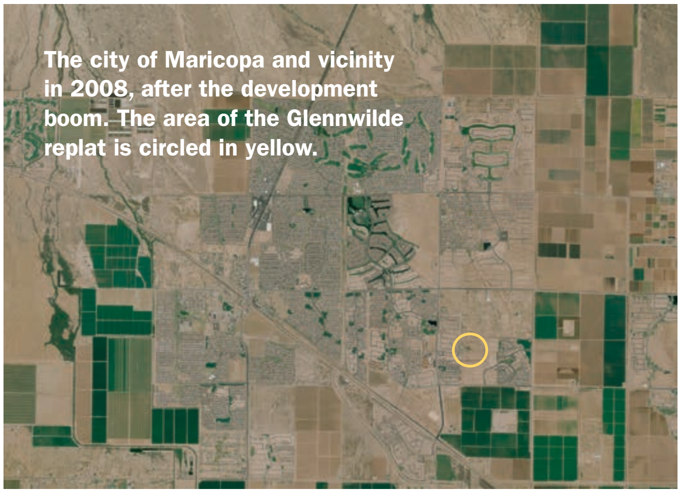
FIGURE 2
River Canyon Original Filing & Vacating Replat



Source: Mesa County, Colorado



The city of Maricopa and vicinity in 2003, early in the development boom.



The city of Maricopa and vicinity in 2008, after the development boom. The area of the Glennwilde replat is circled in yellow.

resulted in a shortage of retail and service use areas and a scarcity of designated areas for nonprofits such as churches, private schools, daycare, counseling, and health services. As new residents looked for public services and local jobs, this dearth of land for employment and public facilities became increasingly problematic.

> Eroding subdivision roads carve up agricultural lands, and lonely "spec" houses dot many rural and suburban landscapes. Some are vacant, but others are partially occupied and require the delivery of public services to remote neighborhoods that generate very little tax revenue.

When the Great Recession hit and the housing bust occurred, supply overran demand for residential lots, and many became distressed. Maricopa faced this challenge and seized the opportunity to re-examine its growth patterns and address the multiple distressed subdivisions plaguing the community.

The city chose to partner with the private sector—including developers, banks, bonding agencies, and other government agencies—to address distressed subdivisions and the lack of institutional and public land uses. The first test of this new approach began when a Catholic congregation was looking for a church site in an urban location with existing sewage, water, and other necessary infrastructure. The city of Maricopa served as a facilitator to connect the church with the developers of Glennwilde, a partially built, distressed development. The church chose a site in a late phase of the subdivision—at that point still a paper plat. The city vacated the plat for that site and returned it to one large parcel, which the Glennwilde developer then sold to the church.

Construction has not yet begun, but the project has served as a model for other arrested developments. The collaborative effort among the city, owners of currently distressed subdivisions, and other interested parties has also inspired approved proposals for a Church of Latter Day Saints stake center, a civic center, a regional park, and a multigenerational facility throughout the city.

How Teton County, Idaho, Demanded Plat Redesign, Vacation, or Replatting

Rural, unincorporated Teton County, Idaho—with an estimated year-round population of 10,170—has a total of 9,031 platted lots, and 6,778 are vacant. Even if the county's annual growth rate returned to 6 percent, where it hovered between 2000 and 2008, this inventory of lots reflects a stockpile adequate to accommodate growth for approximately the next 70 years. This extreme surplus of entitlements—with three vacant entitled lots for every developed lot in the county—stems from three poor decisions the board of commissioners made from 2003 to 2005.

First, the county adopted a quick and easy process for landowners to request the right to up-zone their properties from 20-acre lots to 2.5-acre lots. None of these zone changes were granted in tandem with a concurrent development proposal; virtually all were granted for future speculative development. It was not uncommon for the county to up-zone hundreds of acres in a single night of public hearings; the agenda for one meeting could include up to ten subdivision applications.

Second, the county's *Guide for Development 2004–2010* called for aggressive growth, with a focus on residential construction to drive economic development. The goals and objectives, however, were vague, and the plan failed to specify the type and location of projects. Discredited by the community, the document was ultimately ignored during the approvals process and fostered explosive, random development, resulting in six years of land use decisions made without any coherent strategy.

Third, the Board of County Commissioners adopted a Planned United Development (PUD) ordinance with density bonuses in 2005. Under the PUD cluster development provisions, developers could exceed the underlying zoning entitlements by as much as 1,900 percent. Typical PUD density bonuses for good design range between 10 and 20 percent. Now areas with a central water system that were zoned for 20-acre zoning—with 5 units per 100 acres—could be entitled with up to 100 units. In addition, Teton County's PUD and subdivision regulations allowed the sale of lots before infrastructure installment, which provided a huge incentive for speculative development.

After the 2008 market crash, some owners of incomplete developments began looking for ways to restructure their distressed subdivisions. In 2010, Targhee Hill Estates approached the county with a proposal to replat their partially built resort (figure 3). At the time, however, there was no local ordinance, state statute, or legal process that would permit the replatting of an expired development.

The Teton County Valley Advocates for Responsible Development (VARD) stepped in and petitioned the county to create a process to encourage the redesign of distressed subdivisions and facilitate replatting. VARD realized that a plat redesign could reduce intrusion into sensitive natural areas of the county, reduce governmental costs associated with scattered development, and potentially reduce the number of vacant lots by working with landowners and developers to expedite changes to recorded plats.

On November 22, 2010, the Board of County Commissioners unanimously adopted a replatting ordinance that would allow the inexpensive and quick replatting of subdivisions, PUDs, and recorded development agreements. The ordinance created a solution-oriented

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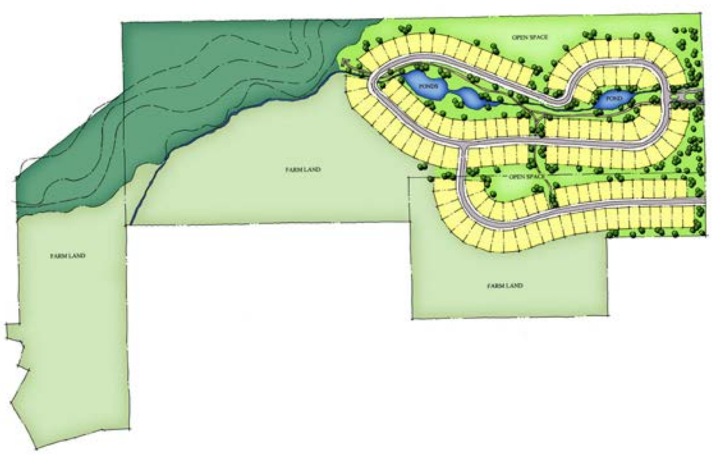
An arrested development succumbs to blight in Teton County, Idaho.

FIGURE 3
Teton County—Replat of Targhee Hill Estates


Entrance to Targhee Hill Estates

Original Sketch Plan



Prelimary Replat

Sources (top to bottom): Anna Trendadue, Valley Advocates for Responsible Development; Land Equity Partners; Land Equity Partners

process that allows Teton County to work with developers, landowners, lenders, and other stakeholders to untangle complicated projects with multiple ownership interests and oftentimes millions of dollars in infrastructure.

The ordinance first classifies the extent of any changes proposed by a replat into four categories: 1) major increase in scale and impact, 2) minor increase in scale and impact, 3) major decrease in scale and impact, 4) minor decrease in scale and impact. Any increases in impact may require additional public hearings and studies, whereas these requirements and agency review are waived (where possible) for decreases in impact. In addition, the ordinance waives the unnecessary duplication of studies and analyses that may have been required as part of the initial plat application and approval. Teton County also waived its fees for processing replat applications.

The first success story was the replatting of Canyon Creek Ranch Planned Unit Development, finalized in June 2013. More than 23 miles from city services, Canyon Creek Ranch was originally approved in 2009 as a 350-lot ranch-style resort on roughly 2,700 acres including approximately 25 commercial lots, a horse arena, and a lodge. After extensive negotiations between the Canyon Creek development team and the Teton County Planning Commission staff, the developer proposed a replat that dramatically scaled back the footprint and impact of this project to include only 21 lots over the 2,700 acre property. For the developer, this new design reduces the price tag for infrastructure by 97 percent, from $24 million to roughly $800,000, enabling the property to remain in the conservation reserve program and creating a source of revenue on it while reducing the property tax liability. The reduced scale and impact of this new design will help preserve this critical habitat and maintain the rural landscape, which is a public benefit to the general community.

Conclusion

While recovery from the most recent boom and bust cycle is nearly complete in some areas of the country, other communities will be impacted by vacant lots and distressed subdivisions well into the future. Future real estate booms will also inevitably

Photo: © Anna Trentadue

Mountain Legends in Driggs, Idaho, was planned as a 114-lot vacation home PUD. Through the use of Teton County's newly adopted replatting and plat vacation ordinances, the paper plat was vacated and returned to farmland.

result in new busts, and vulnerable communities can build a solid foundation of policies, laws, and programs now to minimize new problems stemming from the excess entitlement of land. Communities and others involved in real estate development would be well-served by ensuring they have mechanisms in place to adapt and adjust to evolving market conditions. For jurisdictions already struggling with distressed subdivisions, a willingness to reconsider past approvals and projects and to acknowledge problems is an essential ingredient to success. Communities that are able to serve as effective facilitators as well as regulators, as demonstrated in the case studies presented here, will be best prepared to prevent and then respond and treat distressed subdivisions and any problems that may arise from excess development entitlements.

For More Tools and Recommendations

This article was adapted from a new Policy Focus Report from the Lincoln Institute, Arrested Developments: Combating Zombie Subdivisions and Other Excess Entitlements *(p. 30)*, *by Jim Holway with Don Elliott and Anna Trentadue. For more detailed information—including best practices, policy recommendations, and a how-to guide for communities dealing with excess entitlements—download the full Policy Focus Report or order a print copy* (www.lincolninst.edu/pubs). *Additional information is available on the companion website* (www.ReshapingDevelopment.org).

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Residential Wealth Distribution in Rio de Janeiro

Overlooking the wealthy beachfront neighborhood of São Conrado, Rio de Janeiro's Rocinha *favela* is one of the city's largest informal settlements.

David M. Vetter, Kaizô I. Beltrão, and Rosa M. R. Massena

Housing is an important component of both a household's net worth and aggregate national wealth or stock of residential capital. Aggregate residential wealth is the sum of the values of all housing units. In Brazil, residential structures represent about one-third of total net fixed capital, so their value is important for economic and social policy. This analysis asks: What variables determine the stock values of residential property? How do location and neighborhood conditions affect these values? What is the aggregate residential wealth in the Rio de Janeiro Metropolitan Region (Metro Rio)? What is its distribution among household income and housing value groups? In other words, what generates residential wealth? How much residential wealth is there? Who holds it? Where is it located? (Vetter, Beltrão, and Massena 2013.)

Methodology for Estimating Residential Wealth

To address these questions, we first calibrated a hedonic residential rent model with sample microdata from the 2010 population census conducted by the Brazilian Institute of Geography and Statistics (IBGE). The units of analysis are households living in private, permanent housing units in urban areas of Metro Rio. The total number of households in 2010 was 3.9 million, and our sample is 223,534 (5.7 percent). We used the 41,396 renters in the sample to calibrate our model and then estimated the rents for homeowners and the landlords of rent-free units. Finally, we transformed the actual and imputed rents into housing values by dividing them by the monthly discount rate of 0.75 percent (9.38 percent annual rate), as is standard practice for Brazilian residential wealth studies (Cruz and Morais 2000, Reiff and Barbosa 2005, and Tafner and Carvalho 2007).

The underlying assumption in these studies is that the hedonic prices of the characteristics in the model and the discount rate are similar for rental and nonrental units. These are strong but necessary assumptions for the application of the methodology with the existing census microdata. The sum of estimated housing values is our measure of residential wealth. The objective is to estimate the aggregate value of all housing units and their average values.

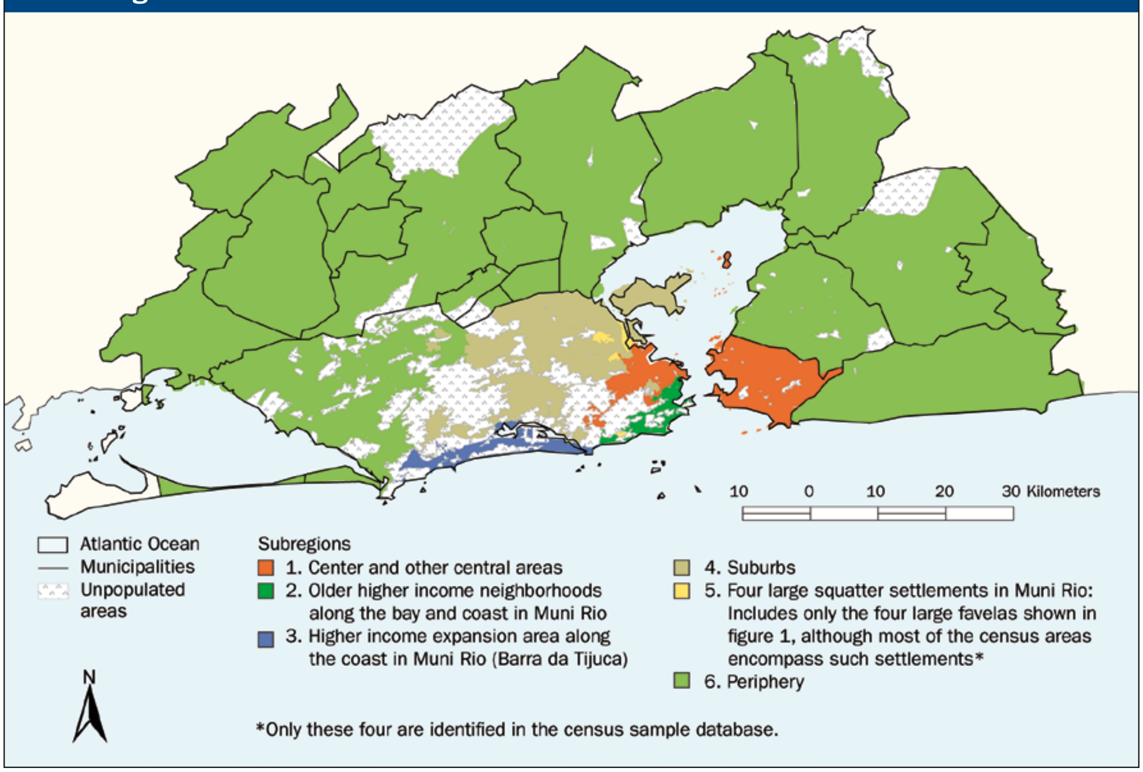
In calculating average housing prices for these groups, we do not control for housing size or other characteristics, as would be done for hedonic housing price indices. Using census microdata, we can also estimate the residential wealth by household income as well as for smaller spatial units within municipalities, such as neighborhoods or districts. Even though the sample of rental units is relatively large, sample size drops rapidly as rents and household incomes rise, and the variances are particularly high for the open group at the top end of the distribution. Because we do not have data on the value of mortgages, our measure is of gross rather than net residential wealth.

Using rents from the census or a household survey compares favorably with other commonly used methods for estimating residential wealth for the Brazilian national accounts and related studies (Garner 2004), such as asking homeowners to estimate the selling price or monthly rent of their homes, using the asking prices for home sales, or using the prices registered when recording the sale. Whereas renters know their monthly rent payment, the informants may have little understanding of current trends in housing prices, and the original asking price is often higher than the final sale price. In Rio de Janeiro, the municipal government uses its own estimates of the sale prices based on asking prices, rather than the value registered in calculating the real estate transfer tax, because buyers and sellers often register lower prices.

In our hedonic residential rent model, the dependent variable is a vector of residential rents, and the independent variables are matrices of the structural characteristics of the housing unit, access to employment, and neighborhood characteristics, including indicators of access to urban infrastructure and services. The variables used are for the household per se and also for the census area in which it is located. Figure 1 shows Metro Rio's 336 census areas and the larger municipal boundaries grouped into six subregions based on indicators analyzed in this and previous studies (Lago 2010).

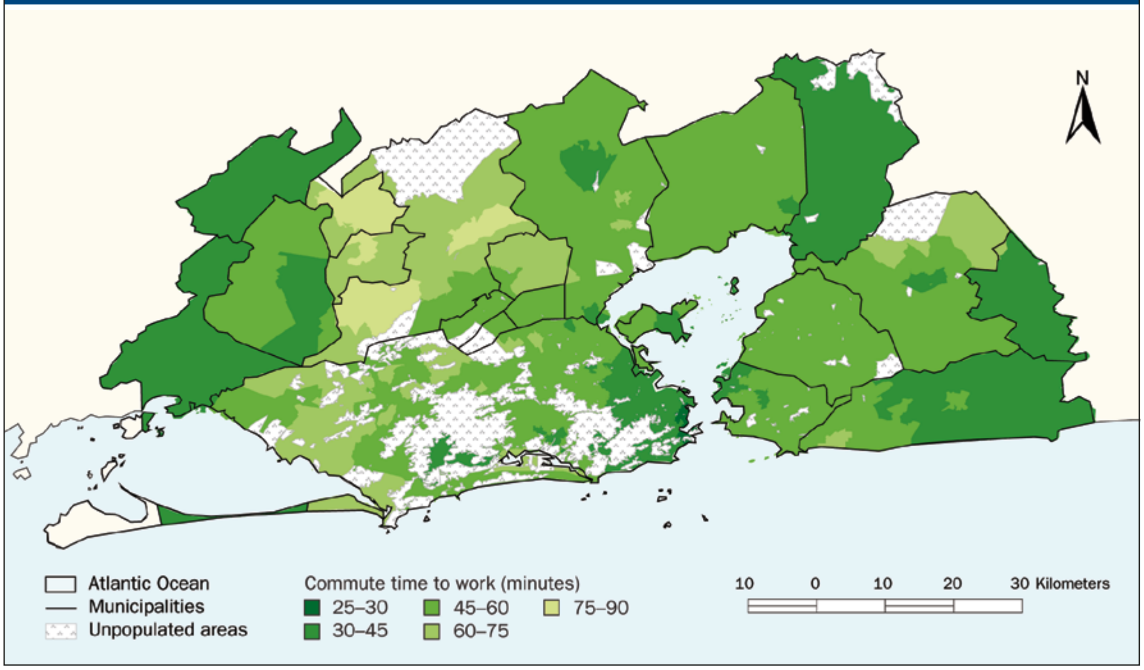
The indicator for access to employment measures the average commute time to work for residents in each of the census areas. Figure 2 (p. 16) shows that the average commute time increases with distance from the center, but not by as much as one might expect—partly due to increased traffic congestion in all areas and to the fact that Metro

FIGURE 1
Six Subregions of Metro Rio



Source: Based on the authors' analysis and previous studies.

FIGURE 2
Average Commute Times for Metro Rio Census Areas, 2010



Source: Authors' calculations with 2010 Census microdata.

Rio is polycentric with many subordinate centers.

The indicators of the quality of neighborhood infrastructure and services include the household`s access to the public sewer and water systems, garbage collection, and block conditions (e.g., street paving and drainage). As these indicators are highly intercorrelated, the component scores from a principal components analysis serve as the independent variables in the hedonic model. Component 1 explains 46.6 percent of the variance and shows high positive loadings on adequate block conditions and infrastructure, and high negative loadings on inadequate block conditions (e.g., garbage in the street and open sewers), indicating which areas have a higher level of attractiveness or desirability (figure 3). Although the lowest scores are clearly concentrated in the outlying areas, the patterns of attractiveness vary considerably. As with commute times, the distribution pattern of the attractiveness scores reveals the complexity of Metro Rio's spatial structure.

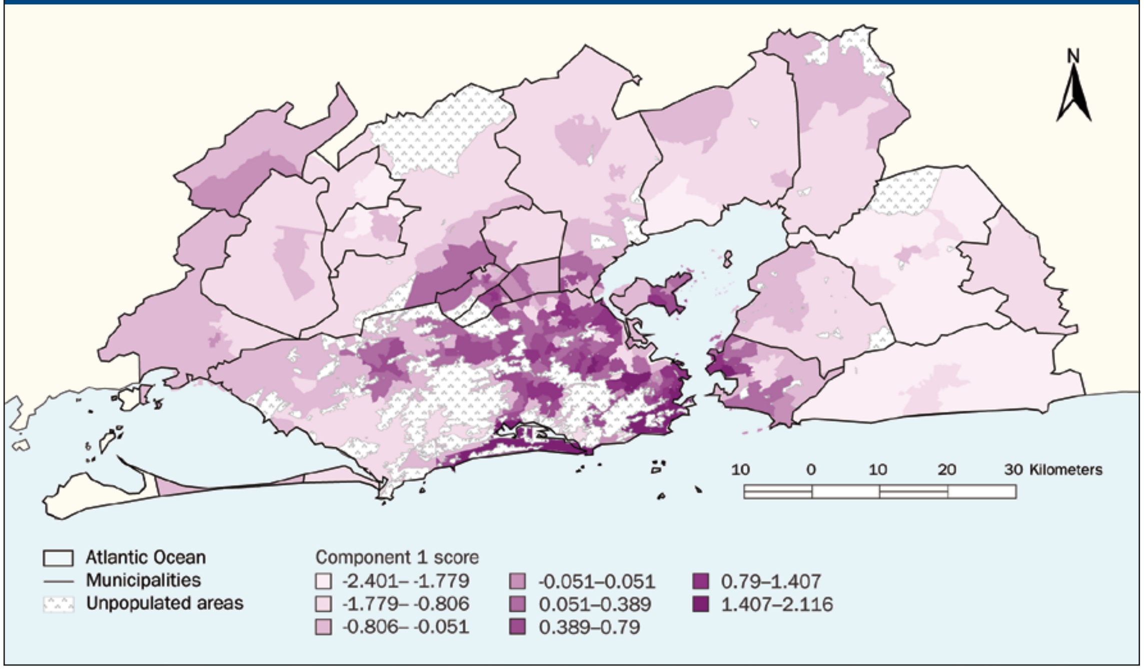
Our hedonic model explains 73 percent of the variance of residential rent. The key independent variables are statistically significant; neighborhood quality and access to employment explain nearly two-thirds of the variance, while the structural characteristics of the housing explain only about one-third of the variance. In other words, the bulk of housing value is the capitalized value of access to employment and to neighborhood infrastructure and services, all of which are determined in large part by public expenditures. Figure 4 (p. 18) shows the distribution of average estimated housing values for census areas in US$ determined by our methodology. (The average exchange rate for 2010 is US$1=R$1.76.) These values tend to be highest in areas affording relatively low commute times and good access to urban infrastructure and services.

Distribution of Residential Wealth

How much residential wealth is the property of homeowners versus the landlords of rental properties and rent-free units used by employers, family members, or others? Our estimate of Metro Rio's aggregate residential wealth of both occupied and unoccupied units in 2010 is US$155.1 billion (94.2 percent of Metro Rio's 2010 GDP of US$164.4 billion) and US$140.2 billion for occupied units only (84.2 percent of Metro Rio's GDP). Among total occupied units, 74.8 percent of this residential wealth (about US$105 billion) belongs to owner-occupied units, and the rest belongs to landlords of rented and rent-free units. In the case of lower-income households, the landlords could be another lower-income family.

FIGURE 3

Metro Rio Census Area Scores for Component 1: High Neighborhood Attractiveness, 2010



Source: Authors' calculations with 2010 Census microdata.

Table 1 shows that the percent of homeowners is quite similar for all household income groups. For example, homeowners occupy nearly three-quarters of the households in the lowest household income group (with fewer than two minimum salaries or an average annual income of only US$4,407). A key reason for these high home-ownership levels is that those living in *favelas,* squatter settlements, or other types of informal housing can declare themselves homeowners, even if they do not legally own the land on which their home is located. The 2010 Census showed more than 520,000 households (more than 15 percent of the total private permanent urban households) living in these types of settlements in Metro Rio. Land ownership in these settlements is a complex legal question on which even lawyers may not agree, since the chances of removal (at least removal without compensation) are quite low, and those living on land without a legal title may be eligible for squatter's rights after five years under Brazilian law.

Although 25.3 percent of total households earned less than two minimum salaries (US$ 6,960 per year), the homeowners in this group held only 15.3 percent of the aggregate residential wealth of all homeowners. By contrast, only 15.6 percent of households earned 10 or more minimum salaries (US$34,800 per year), but homeowners in this income group held 34.5 percent of the aggregate residential wealth. Nonetheless, lower income households have more residential wealth than one might expect, in part because they are often homeowners in informal settlements.

Figure 5 (p. 19) shows the Lorenz Curve for the distribution of aggregate residential wealth of homeowners by housing value groups. This

TABLE 1

Key Indicators by Household Income Groups in Metro Rio, 2010

Income Group/ Number of Minimum Salaries[1]	Average Annual Household Income (US$)	Percent of Homeowners	Percent of Total Households	Percent of Total Residential Wealth for Homeowners[2]
Less than 2	4,407	74.9	25.3	15.3
2 to 4	9,986	76.1	32.1	22.8
4 to 6	17,239	76.6	14.7	13.2
6 to 8	24,462	76.6	7.5	8.1
8 to 10	31,547	77.0	4.7	6.1
10 or more	86,743	77.8	15.6	34.5
Total	**23,766**	**76.2**	**100.0**	**100.0**

Source: Authors' calculations with 2010 Census microdata.

1. The value of a monthly minimum salary in 2010 would be US$290.

2. Excludes households that declare no income (5.9 percent of total households) and those missing a value for the independent variables of the model.

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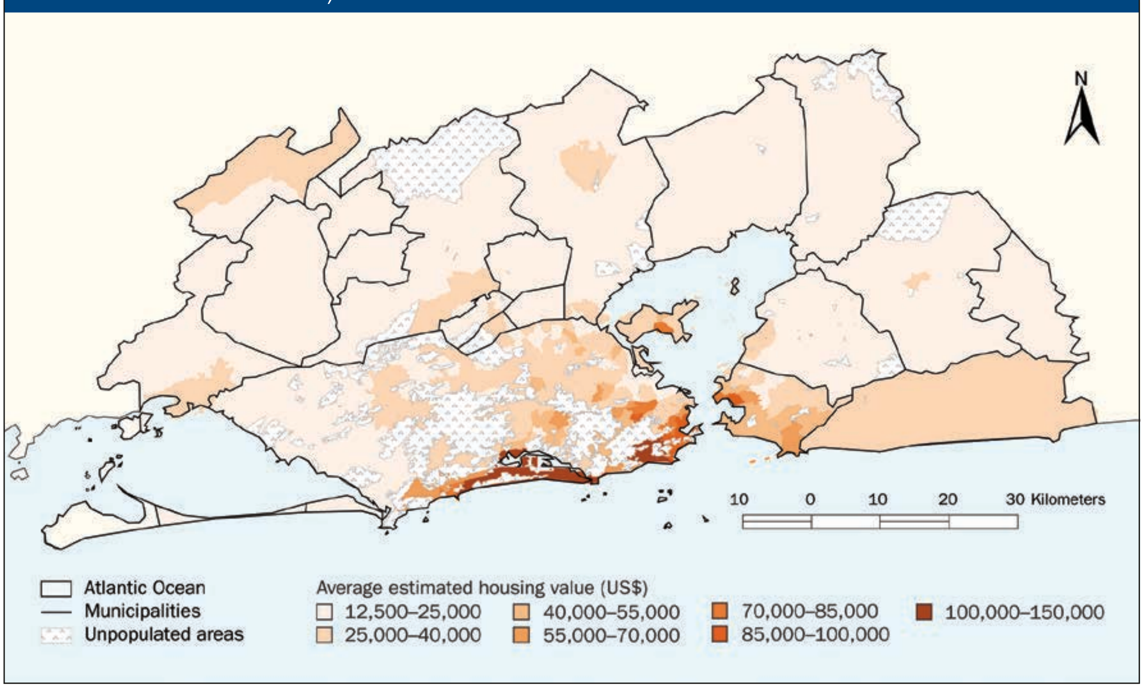
The Cinelandia subway station serves Rio's center.

FIGURE 4

Average Estimated Values (in US$) for Private Permanent Housing for Metro Rio Census Areas, 2010



Source: Authors' calculations with 2010 Census block conditions and sample data.

distribution is quite unequal, because the nearly 23.7 percent who are not homeowners have no such wealth (as shown where the Lorenz curve runs along the bottom of the axis) and because those living in higher-priced housing have greater residential wealth.

Distribution of Residential Wealth by Subregions

The bulk of aggregate residential wealth is held by those living in the suburbs and periphery around Metro Rio, although the average value of their housing units is lower. Table 2 shows that those subregions (4 and 6) together represent 79 percent of Metro Rio's total households (3.1 million) and 58.1 percent of aggregate residential wealth (US$80.9 billion). Subregion 2 (the older, higher-income neighborhoods along the bay and coast) holds only 6.3 percent of Metro Rio's households (about 242,000) and 19.0 percent of its residential wealth.

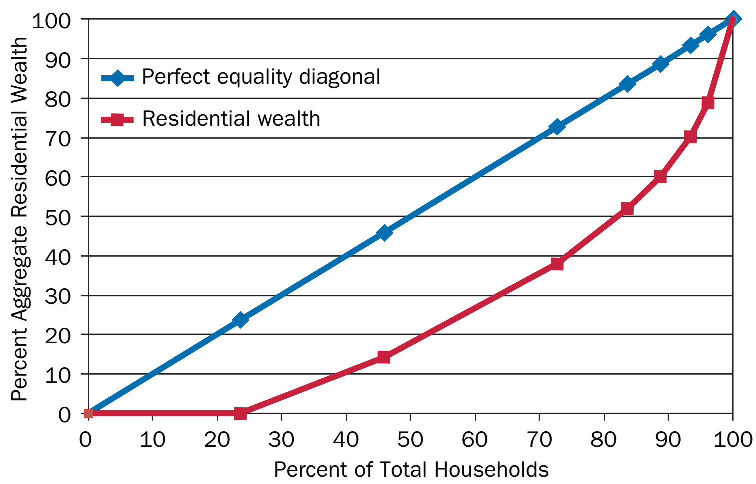
The percentage of renters is highest in the large squatter settlements (subregion 5), at 28.6 percent, with an additional 2.7 percent of rent-free units. Homeownership rates are highest (80.4 percent) in the periphery (subregion 6), where many owners live on land for which they do not have full legal title, though these areas generally are not squatter settlements as defined by IBGE.

Spatial Distribution of Household Income

One result of the interplay of market forces that shape residential rent and housing prices is that the distribution of aggregate household income tends to mirror the distribution of aggregate residential wealth. In other words, there is a relatively high residential segregation by income groups, with lower-income families concentrated in the large squatter settlements and in the suburbs and periphery (subregions 4, 5, and 6). High spatial concentration of higher-income households generates higher aggregate income and demand in areas that support higher-level services—in turn making these areas more attractive to higher-income homebuyers and renters. Figure 6 (p. 20) shows that the average annual household incomes for the census areas in 2010 reflect to a large extent the distribution of average housing values (figure 4), commute times (figure 2), and neighborhood attractiveness (figure 3).

In 2010, the high-income Barra da Tijuca area (subregion 3) held only 2.1 percent of total households in Metro Rio but 8.1 percent of aggregate household income and 7.6 percent of aggregate residential wealth. By comparison, the four large

FIGURE 5
Lorenz Curve of the Distribution of Residential Wealth by Housing Value Groups in Metro Rio, 2010



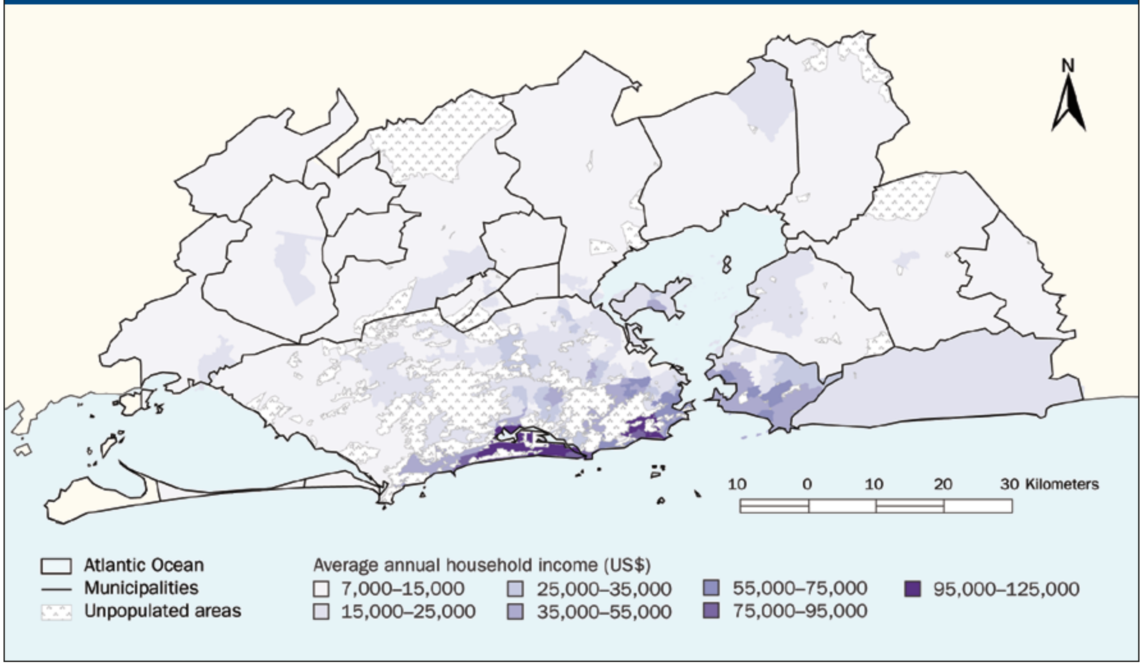
Source: Authors' calculations with 2010 Census block conditions and sample data.

TABLE 2
Residential Wealth and Annual Household Income in Metro Rio, 2010

Six Subregions		Percent of Homeowners	Percent of Total Households	Percent of Aggregate Residential Wealth	Percent of Aggregate Annual Household Income
1	Center and other central areas	71.4	10.2	13.8	17.0
2	Older, higher-income areas along the bay and coast	65.7	6.3	19.0	19.0
3	Higher-income expansion area along the coast	70.8	2.1	7.6	8.1
4	Suburbs	73.8	27.9	25.4	25.7
5	Large squatter settlements in Muni Rio	68.7	2.5	1.4	1.0
6	Periphery	80.4	51.1	32.7	29.2
Total		**76.2**	**100.0**	**100.0**	**100.0**

Source: Authors' calculations with 2010 Census block conditions and sample data.

FIGURE 6
Average Annual Household Incomes (in US$) for Metro Rio Census Areas, 2010



Source: Authors' calculations with 2010 Census block conditions and sample data.

TABLE 3
Indicators of Aggregate Residential Wealth and Household Income in Subregions 3 and 5 of Metro Rio, 2010

Indicators	Subregion 3: Higher Income Expansion Area/ Barra da Tijuca	Subregion 5: Four Large Squatter Settlements
Number of households	80,659	97,013
Percent of homeowners	70.8	68.7
Percent of total households in Metro Rio	2.1	2.5
Percent of aggregate residential wealth in Metro Rio	7.6	1.4
Percent of aggregate annual household income in Metro Rio	8.1	1.0
Aggregate residential wealth (US$ billions)	10.65	2.02
Average housing value (US$)	132,262	20,954
Average annual household income (US$)	87,194	9,349
Aggregate annual household income (US$ billions)	7.0	0.9
Average commute time to work (minutes)	56.8	42.0
Average Score on Component 1	1.4	(1.0)

Source: Authors' calculations with 2010 Census block conditions and sample data.

squatter settlements of subregion 5 held 2.5 percent of total households but only 1.0 percent of aggregate household income and 1.4 percent of residential wealth. Nonetheless, the aggregate residential value in these four squatter settlements was nearly US$2 billion, and the average housing value was almost US$21,000. These results show a relatively high spatial concentration of both aggregate household income and residential wealth that is tempered slightly by the homeownership rate in squatter settlements.

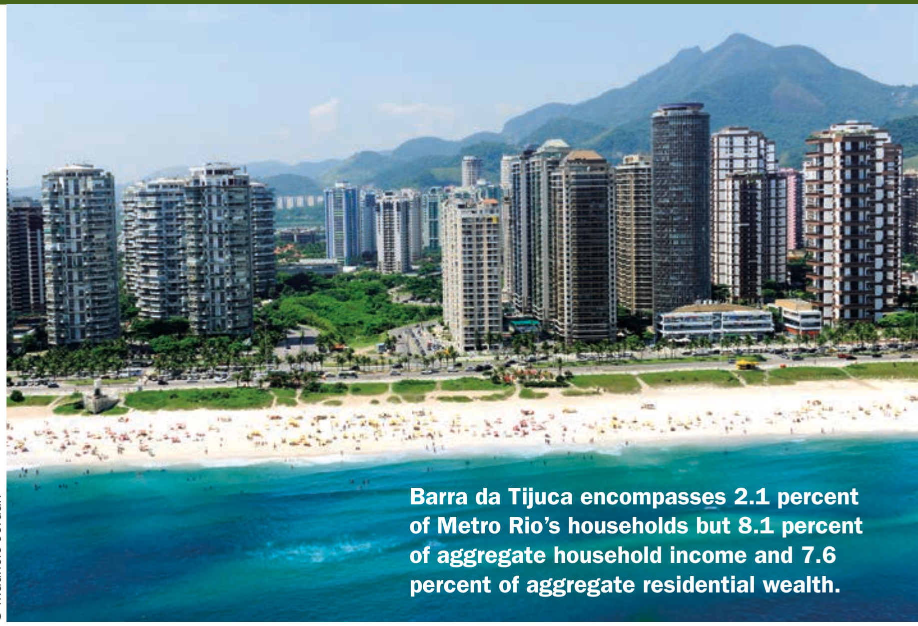
Implications for Methodology and Policy Decisions

The methodology used in this analysis provides interesting insights into the macroeconomic and social importance of residential wealth; the variables that generate it; its distribution among household tenure, income, and housing value groups; and its allocation among subregions ranging from high-income neighborhoods to squatter settlements. The strong assumptions required in using the methodology must be taken into account when interpreting the results. Data from property registries or other sources with more detailed information on unit size could eventually be used to complement this methodology.

Government services, investments, and regulatory actions can result in benefits (e.g., access to employment, urban services, and amenities) and costs (e.g., taxes, fees, and negative environmental impacts) that are capitalized into the value of housing in the affected neighborhoods. For homeowners, positive net benefits from government actions increase their residential wealth, because they are capitalized in the value of their housing. However, for renters and new homebuyers, these same government actions can cause rents and housing prices to rise along with the net benefits. Some households, especially the lower-income renters and homebuyers, may have to leave the benefited area, and other potential new owners may be unable to locate in the area. Thus, housing tenure is important in determining whether or not a household receives the net benefits of government investments and regulatory actions.

Capitalization of the net benefits of government actions would clearly be an issue for the more than 30 percent of households in the four large squatter settlements that are not homeowners, as well as for those entering the housing market. Although there are no reliable data on housing turnover, we know that the total number of urban households in Metro Rio increased more than 20 percent, by almost 657,000, between 2000 and 2010. This increment was 14 percent higher than the total number of households in the Municipality of Curitiba (the state capital of Paraná) in 2010 and well over twice the number in Washington, D.C. All these new households, plus all the renters (about one-fifth of total households) and homeowners wishing to move, would be subject to increased rents and housing prices generated by the net benefits of government actions.

These results demonstrate a need for policies to ensure that rising rents and housing prices do not exclude some households from areas where public services and infrastructure are being improved. For example, financial assistance for home purchases could be part of the improvement program. One way of financing the needed lower-income housing and investment programs would be to capture part of the value being generated by infrastructure investments from higher-income households. Capturing part of the value generated by urban investments could help finance additional housing subsidies for lower-income families, as well as added investment, thereby providing a kind of investment multiplier.



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Barra da Tijuca encompasses 2.1 percent of Metro Rio's households but 8.1 percent of aggregate household income and 7.6 percent of aggregate residential wealth.

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How Do Foreclosures Affect Property Values and Property Taxes?

James Alm, Robert D. Buschman, and David L. Sjoquist

In the wake of the housing market collapse and the Great Recession—which caused a substantial increase in residential foreclosures and often precipitous declines in home prices that likely led to additional foreclosures—many observers speculated that local governments would consequently suffer significant property tax revenue losses. While anecdotal evidence suggests that foreclosures, especially when spatially concentrated, lowered housing prices and property tax revenue, the existing body of research provides no empirical evidence to support this conclusion (box 1). Drawing on proprietary foreclosure data from RealtyTrac—which provides annual foreclosures by zip code for the period 2006 through 2011 (a period that both precedes and follows the Great Recession)—this report is the first to examine the impacts of foreclosures on local government property tax values and revenues. After presenting information on the correlation between foreclosures and housing prices nationwide, we shift focus to Georgia in order to explore how foreclosures affected property values and property tax revenue across school districts throughout the state. Our empirical analysis indicates that, indeed, foreclosures likely diminished property values and property tax revenues. While still preliminary, these findings suggest that foreclosures had a range of effects on the fiscal systems of local governments.

Potential Links between Housing Prices, Foreclosures, and Property Values

Local governments in the United States rely on various own-source revenues, including local income, property, and general sales taxes and specific excise taxes, fees, and user charges. Of these, the dominant source is by far the property tax. In 2011, local property taxes accounted for roughly three-fourths of total local government tax revenues and for nearly one-half of total local own-source revenues (including fees and charges).

Some local taxes, such as income and sales taxes, have bases that vary closely with the levels of economic activity, and the Great Recession seriously depressed revenues from such taxes. The basis of the property tax is assessed value, which does not automatically change in response to economic conditions; in the absence of a formal and deliberate change in assessment, a decrease in the market value does not necessarily translate into a decrease in assessed value. Assessment caps, lags in reassessments, and the ability to make deliberate changes in millage or property tax rates combine so that economic fluctuations that influence housing values may not affect the property tax base or property tax revenues in any immediate or obvious way. Over time, however, assessed values tend to reflect market values, and property tax revenues also come under pressure.

A weakened housing market—with lower housing values and more foreclosures—may reduce local government tax revenues from several sources (Anderson, 2010; Boyd, 2010; Lutz, Molloy, and Shan, 2010), including real estate transfer taxes, sales taxes on home construction materials, and income taxes from workers in the housing construction and home furnishings industries. Because property tax revenues are such a large share of local tax revenue, however, changes in property tax revenues are often larger than the changes from these other housing-related taxes.

Foreclosure Activities Nationwide During and After the Great Recession

Figure 1 (p. 24) presents the total nationwide numbers of foreclosures at the 5-digit zip code level as a share of the number of owner-occupied homes in 2010. This figure demonstrates the clear geographic concentration of foreclosures. Arizona, California, and Florida were especially hard hit by the collapse of the housing bubble. However, other areas also experienced significant foreclosure activity.

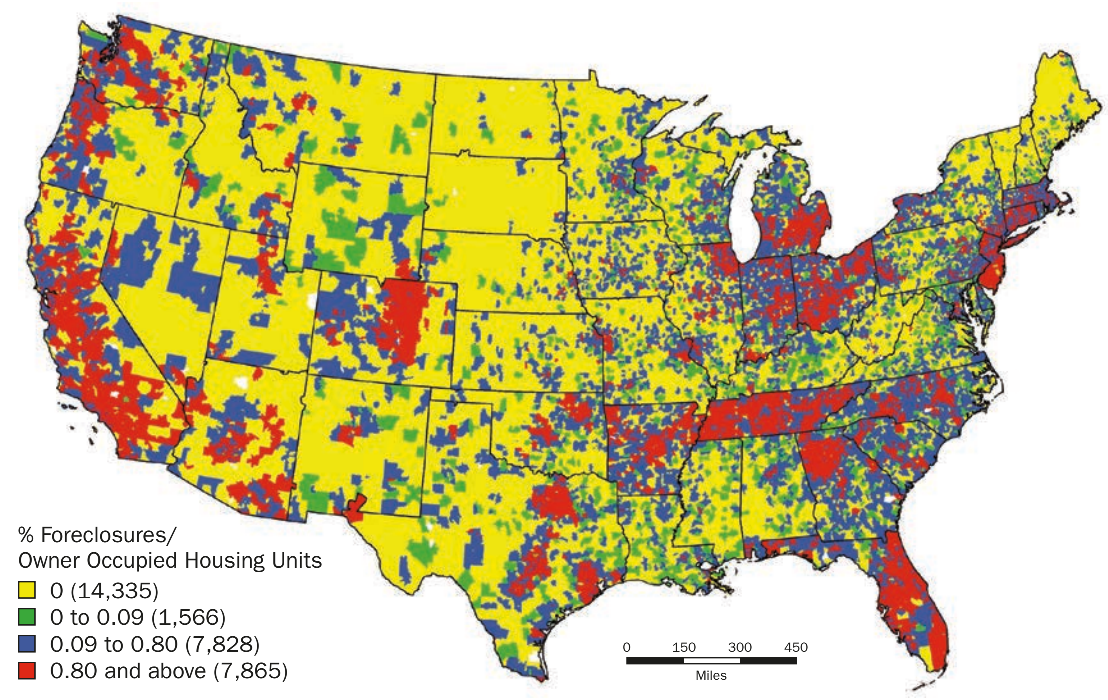
The Federal Housing Finance Agency (FHFA) produces a housing price index for each metropolitan statistical area (MSA). We matched the RealtyTrac foreclosure data to the FHFA housing price index for 352 metropolitan statistical areas. Figure 2 (p. 24) presents a simple scatterplot that relates total foreclosures over the years 2006 to 2011 as a share of the number of owner-occupied housing units in 2010, to the change in the housing price index over the period 2007 to 2012 for all 352 metropolitan areas. The simple correlation coefficient between foreclosures per owner-occupied

BOX 1

Existing Research into the Impacts of Economic Factors on Property Tax Revenues

While there is existing research examining the various impacts of economic factors on property tax revenues, these studies use data that reflect only a previous recession (e.g., the 2001 recession) or that cover only the very start of the housing crisis in the Great Recession. Doerner and Ihlanfeldt (2010), for example, focus directly on the effects of house prices on local government revenues, using detailed panel data on Florida home prices during the 2000s. They conclude that changes in the real price of Florida single-family housing had an asymmetric effect on government revenues. Price increases do not raise real per capita revenues, but price decreases tend to dampen them. Doerner and Ihlanfeldt also find that asymmetric responses are due largely to caps on assessment increases, positive or negative lags between changes in market prices and assessed values, and decreased millage rates in response to increased home prices. Alm, Buschman, and Sjoquist (2011) document the overall trends in property tax revenues in the United States from 1998 through 2009—when local governments, on average, were largely able to avoid the significant and negative budgetary impacts sustained by state and federal governments, at least through 2009, although there was substantial regional variation in these effects. Alm, Buschman, and Sjoquist (2009) also examine the relation between education expenditures and property tax revenues for the 1990 to 2006 period. In related work, Alm and Sjoquist (2009) examine the impact of other economic factors on Georgia school district finances such as state responses to local school district conditions. Finally, Jaconetty (2011) examined the legal issues surrounding foreclosures, and the MacArthur Foundation has funded a project on foreclosures in Cook County, Illinois.

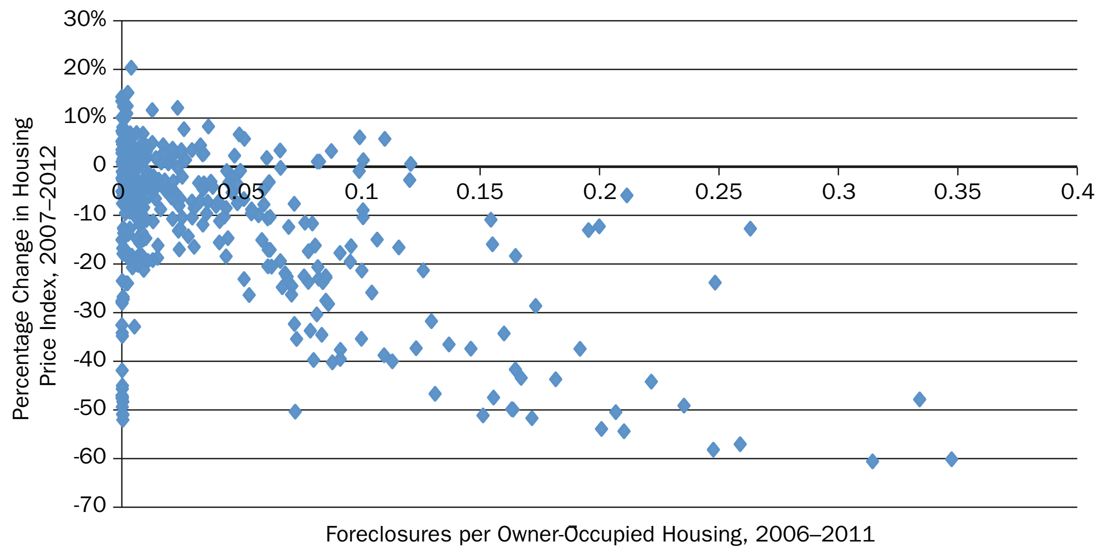
FIGURE 1
Total Foreclosures Nationwide as Percent of Owner-occupied Housing Units, by 5-digit Zip Code Level, 2006–2011



Source: Authors' calculations from RealtyTrac data.

housing units and the change in housing price index is -0.556; if we consider only those MSAs with non-zero foreclosures over the period, the correlation coefficient is -0.739. This simple analysis suggests that foreclosures have a significant negative relation with housing values. The next step is to explore the effect of foreclosures on the property tax base and on property tax revenues. In the next section, we examine this issue for the state of Georgia.

FIGURE 2
Total Foreclosures Nationwide and Housing Prices



Source: Authors' calculations from RealtyTrac data.

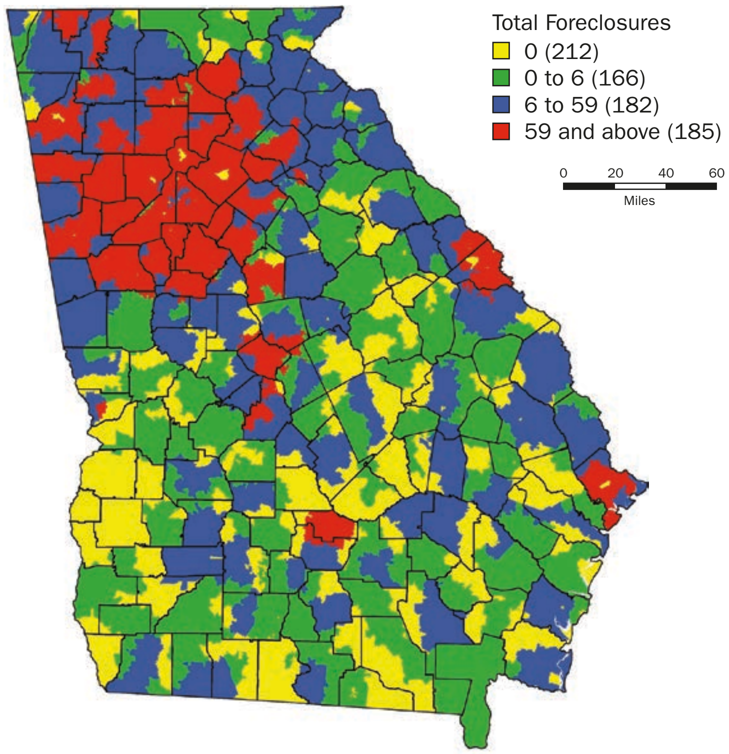
More Detailed Analysis: Foreclosures, Property Values, and Property Tax Revenues in Georgia

By examining the effect of foreclosures on property values and property tax revenues in a single state, we eliminated the need to control for the many ways in which institutional factors may differ across states. Georgia is a suitable focal point because in many ways it is roughly an "average" state. For example, local governments in Georgia rely on property taxes only slightly less than the national average; in 2008, property tax revenue as a share of total taxes for local governments was 65.1 percent in Georgia compared to 72.3 percent of the U.S. (Bourdeaux and Jun 2011).

We measure foreclosure activity with the RealtyTrac data, aggregating zip code observations into the corresponding counties. The Georgia Department of Revenue supplied the annual property tax base (referred to as "net digest" in Georgia) and property tax rates. Property tax and total local source revenues for school districts came from the Georgia Department of Education. The tax base is as of January 1 of the respective year. The property tax rate is set in the spring with tax bills being paid in the fall, the revenue from which would be reported in the following fiscal year. School districts are on a July 1 to June 30 fiscal year, so the 2009 tax base and millage rates, for example, would be reflected in revenues for fiscal year 2010. We also use various demographic and economic data (income, employment, and population) measured at the county level to help explain changes in the base. Because these variables are at a county level, for the analysis that follows, we added the property tax base and revenue variables for city school districts to those for the county school systems in each city's county to obtain countywide totals for 159 counties. For counties that include all or part of a city school system, the tax rate is the average of the county and city school tax rates, weighted by the respective property tax base.

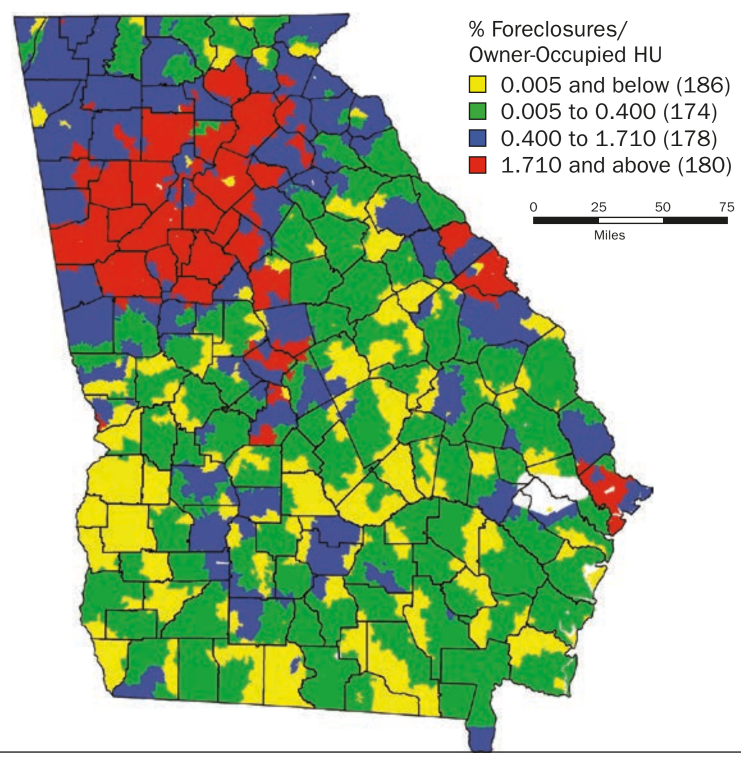
Only county governments conduct property tax assessment in Georgia, but the state evaluates all property tax bases annually, comparing actual sales of improved parcels during the year to assessed values, and determining if the assessment level is appropriate relative to fair market value, which is legally set at 40 percent. The resulting "sales ratio studies" report an adjusted 100 percent property tax base figure for each school district in the

FIGURE 3
Total Georgia Foreclosures by Zip Code, 2006–2011



Source: Authors' calculations from RealtyTrac data.

FIGURE 4
Georgia Foreclosures as a Percent of Owner-occupied Housing by Zip Code, 2006–2011

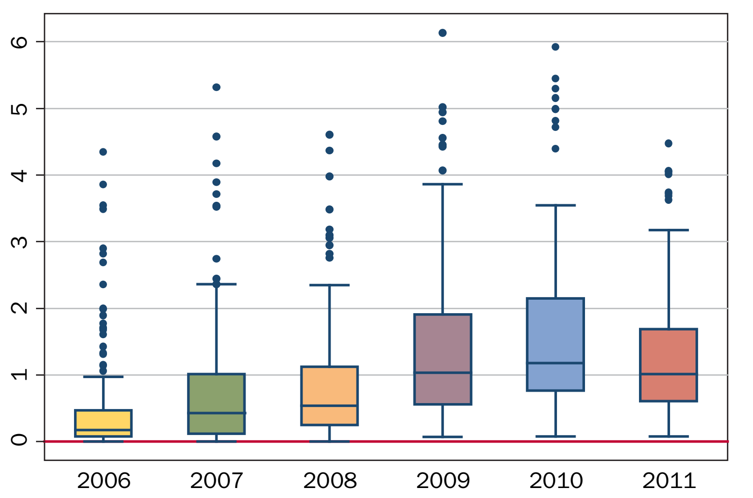


Source: Authors' calculations from RealtyTrac data.

state, along with the calculated ratio. We use these adjusted property tax bases, covering the periods 2000 through 2011, to measure the market value of residential property.

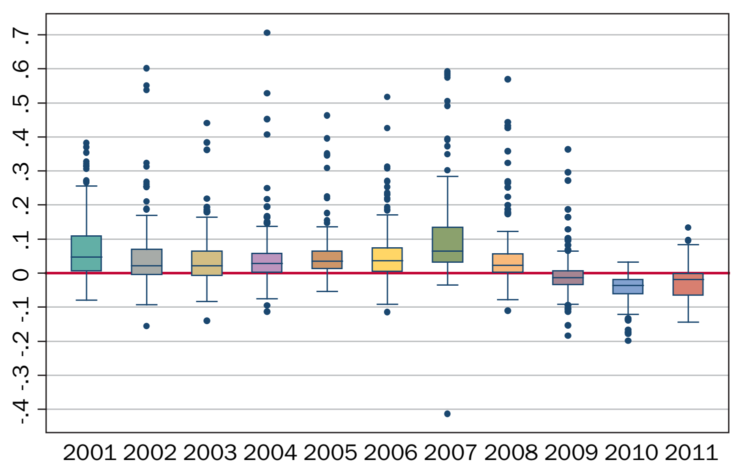
Georgia has very few institutional property tax limitations. School district boards can generally set their property tax rates without voter approval, which is required only if the property tax rate for a county school district exceeds 20 mills. Currently, the cap is binding on only five school systems. Also, there is no general assessment limitation, although one county has an assessment freeze on homestead-ed property. In 2009, the State of Georgia imposed a temporary freeze on assessments across the state, potentially affecting property tax revenue only in school year/fiscal year 2010; however, with net and adjusted property tax bases declining on a per capita basis for most counties in 2009 through 2011, it is unlikely that the freeze has constrained assessments.

FIGURE 5
Foreclosures Per 100 Housing Units by County, 2006–2011



Source: Authors' calculations from RealtyTrac data.

FIGURE 6
Distribution of Net Property Tax Base Changes by County, 2001–2011 (percent change/100)



Source: Authors' calculations from Georgia Department of Revenue data.

Foreclosures

Table 1 provides the statewide mean and median number of foreclosures by zip code for 2006 through 2011. Total foreclosures almost doubled between 2006 and 2010, before declining in 2011. The mean number of foreclosures is much larger than the median, implying that the distribution is highly skewed.

TABLE 1
Foreclosures in Georgia by Zip Code, 2006–2011

Year	Total Foreclosures	Mean Number	Median Number
2006	55,615	75.87	4
2007	75,191	102.58	11
2008	75,307	102.74	16
2009	97,195	132.60	30
2010	110,963	151.38	38
2011	85,865	117.14	31
Total, 2006–2011	**500,136**	**682.31**	**136**

Source: Authors' calculations from RealtyTrac data.

TABLE 2
Number of Georgia Zip Codes with Positive Foreclosures by Year

Years with Positive Foreclosures	Number of Zip Codes	Percent
6	478	65.21
5	85	11.6
4	49	6.68
3	31	4.23
2	16	2.18
1	23	3.14
0	51	6.96
Total	**733**	**100**

Source: Authors' calculations from RealtyTrac data.

Table 2 shows the distribution of Georgia zip codes by the number of years that the zip code had non-zero foreclosures. Over 65 percent of the zip codes had foreclosures in each of the six years, while only 7 percent had no foreclosures in all six years. This distribution suggests that very little of the state was immune to the foreclosure crisis.

Figure 3 (p. 25) shows the distribution of foreclosures across the state over the period 2006 through 2011. Because zip codes differ in size and housing density, we also map the number of foreclosures per owner-occupied housing units for 2010 in figure 4 (p. 25). Note that zip codes marked in white either have no foreclosures or are missing foreclosure data. As one would expect, urban and suburban counties (particularly in the Atlanta metropolitan area) have the most foreclosures. However, there are large numbers of foreclosures in many of the less urban zip codes as well.

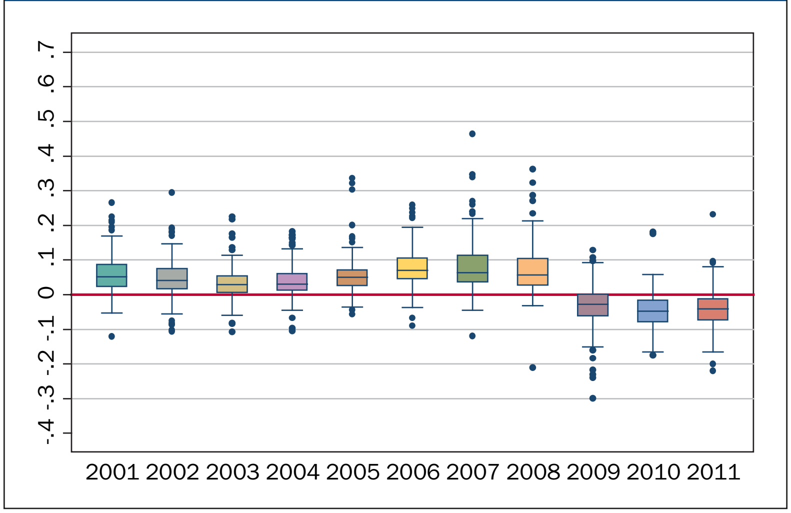
Figure 5 shows the annual distribution of foreclosures per hundred housing units in each of Georgia's 159 counties. Note that the bar in the box represents the median value, the box captures the observations in the second and third quartile, the "whiskers" equal 1.5 times the difference between the twenty-fifth and seventy-fifth percentiles, and the dots are extreme values. The median number of foreclosures by county increased from 0.17 per 100 housing units in 2006 to 1.18 per 100 units in 2010—more than a sixfold increase in the median. There is a high positive correlation between foreclosure activity in 2006 and 2011 across the counties. This correlation is 0.78 when measured relative to housing units and 0.74 when measured on a per capita basis, indicating that counties with above (below) average foreclosure activity before the housing crisis remained above (below) average at its peak.

Property Values

As for changes in property values, figures 6 and 7 show the distributions of annual changes, respectively, in the per capita net property tax base and in the per capita adjusted 100 percent property tax base across the 159 counties from 2001 through 2011. Studies suggest that foreclosures may have spillover effects on the market values of other properties in the jurisdiction (Frame, 2010). We attempt to estimate the effect of foreclosures on market values as measured by the adjusted 100 percent property tax base.

FIGURE 7

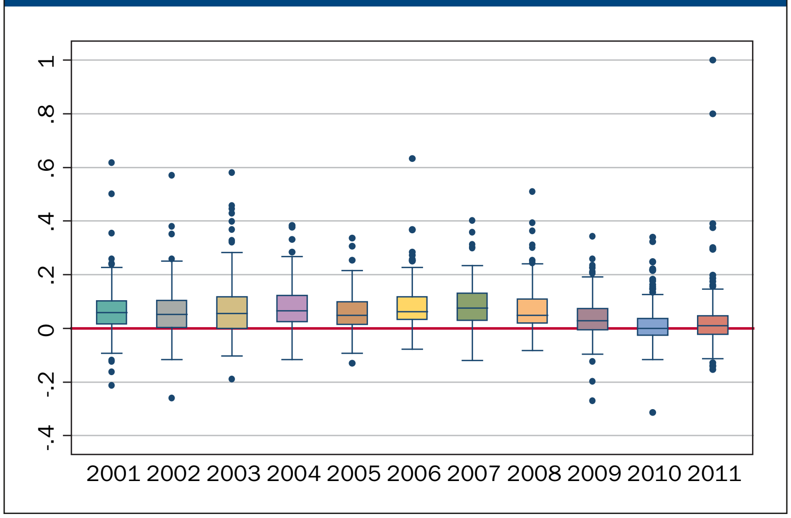
Distribution of Adjusted 100% Property Tax Base Changes by County, 2001–2011 (percent change/100)



Source: Authors' calculations from Georgia Department of Revenue data.

FIGURE 8

Distribution of Property Tax Revenue Changes by County, 1998–2011 (percent change/100)



Source: Authors' calculations from Georgia Department of Education data.

Our results are preliminary, in that the analysis included only Georgia data. Even so, they suggest significant negative effects of foreclosures on property values, controlling for year-to-year percent changes in income, employment, and population. The coefficient estimates on the foreclosures vari-able suggest that a marginal increase of one foreclosure per 100 homes (or approximately the increase in median foreclosures from 2006 to 2011) is associated with a roughly 3 percent decline in the adjusted 100 percent property tax base over each of the two following years. Similarly, an increase of one foreclosure per 1,000 population is associated with nearly a 1 percent decline in the adjusted 100 percent property tax base after one year, and a slightly lower percent decline in the following year.

Property Tax Revenues

We also explore the effect of foreclosures on property tax revenues. Figure 8 (p. 27) depicts the distribution of nominal changes by county in total maintenance and operations property tax revenues since 2001, showing considerable variation across the school systems in the annual changes in property tax revenues. Even in the latest three years of declining property values, at least half the counties annually realized positive nominal growth in property tax revenue. To understand the effect of foreclosure activity on local government property revenues, we estimate regressions that relate foreclosures to property tax levies and to actual property tax revenues.

We find that a rise in foreclosures is associated with a reduction in the levy, after controlling for changes in the property tax base as well as fluctuations in income, employment, and population. An increase of one foreclosure per 100 housing units is associated with about a 1.5 percent subsequent decline in the levy, all else held constant. We also find that foreclosures have a negative impact on revenues, all else constant. Like our earlier estimates, these results are for Georgia only, but they indicate a significant negative relationship between foreclosures and local government property tax levies and revenues. It may be that higher foreclosure activity makes local officials hesitant to raise property tax rates to offset the effect of foreclosures on the tax base.

Conclusions

How have foreclosures driven by the Great Recession affected property values and property tax revenues of local governments? Our results suggest that foreclosures have had a significant negative impact on property values, and, through this channel, a similar effect on property tax revenues, at least in the state of Georgia. Our results also suggest additional effects on levies and revenues after controlling for changes in the tax base. Further work is required to see whether these results extend to other states.

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New Lincoln Institute Enhanced Inkling Ebook

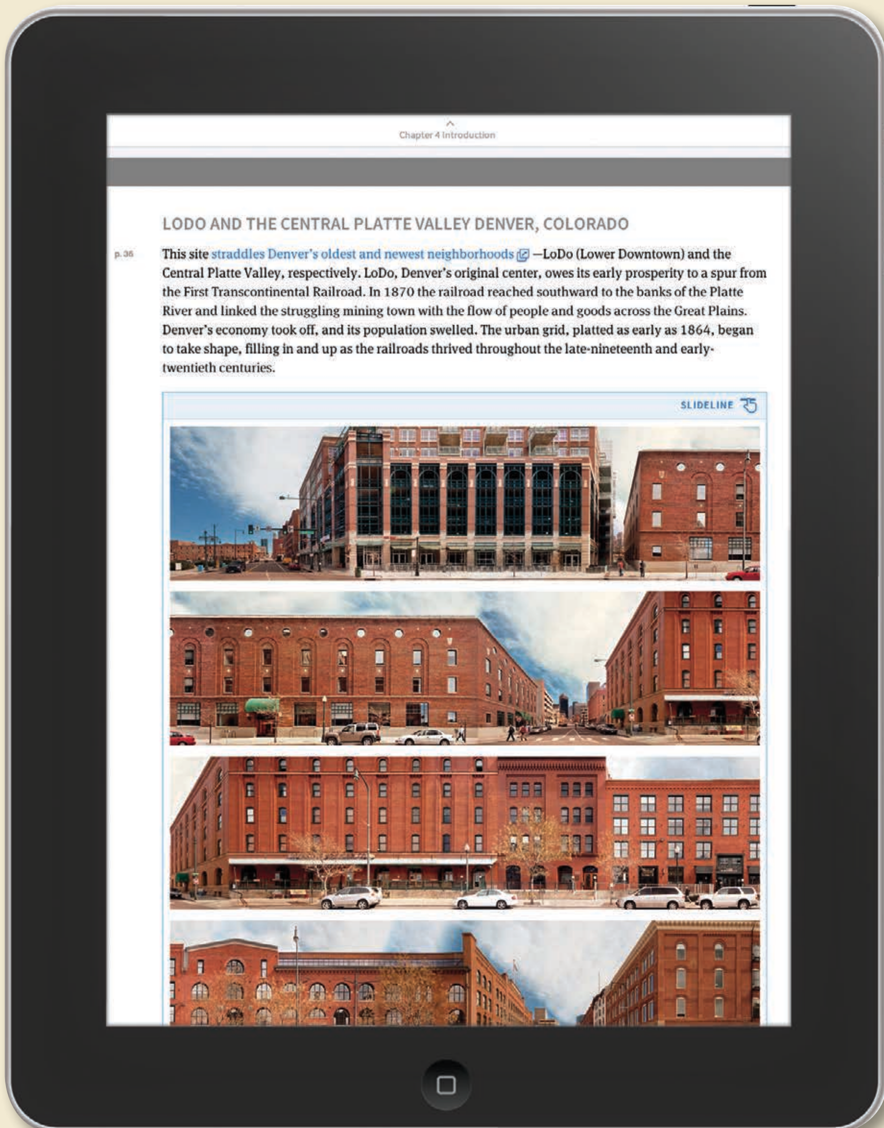
Made for Walking: Density and Neighborhood Form

Lincoln's bestselling title, by landscape architect and urban designer Julie Campoli, will soon be an interactive Inkling ebook. Through self-guided tours, peel-away scale maps, scrollable panoramas, and photo slideshows, readers explore walkable neighborhoods and other elements of cities where residents can live comfortably without a car. The ebook also includes a five-minute educational video about urban walkability as exemplified by Davis Square in Cambridge, Massachusetts.

Researchers delving into the question of how urban form affects travel behavior identify specific characteristics of place that boost walking and transit use while reducing vehicle miles traveled. Together they are known as the "five Ds": diversity (of land uses), density, design, distance to transit, and destination accessibility. In recent years, another key player has joined the list: parking. The Ds have evolved into a handy device for defining and measuring compact form and predicting how that form will affect travel and reduce vehicle miles traveled (VMT). They share the characteristics of compact development often described as "smart growth."

While lowering VMT by any significant measure will require integrating the five Ds at a grand scale, this book visualizes a low-carbon environment in smaller increments by focusing on 12 urban neighborhoods in the United States and Canada. Some are in familiar cities with historically dense land use patterns, intertwined uses, and comprehensive transit systems, such as Green Point in Brooklyn, New York. Others have emerged in unexpected locations, where the seeds of sustainable urban form are taking root on a micro level, such as LoDo and the Central Platte Valley in Denver, Colorado. The interactive Inkling format affords users a more immersive experience of these places, captured in Campoli's hundreds of street-level photographs and panoramas.

Ideal for coursework, Inkling content is search-enabled and shareable via social media. Using Twitter or Facebook, readers can raise questions and exchange notes in the virtual margins and share interactive segments with anyone in their social networks. For less than half the price of the print edition, Inkling *Made for Walking* is available for iPads, iPhones, and web browsers on Macintosh and Windows computers. A sample of chapter 4—which showcases 12 walkable neighborhoods in the U.S. and Canada—is free.



Explore what makes a city walkable through backlit panoramic photographs (above), slideshows, videos, self-guided tours, and peel-away scale maps.

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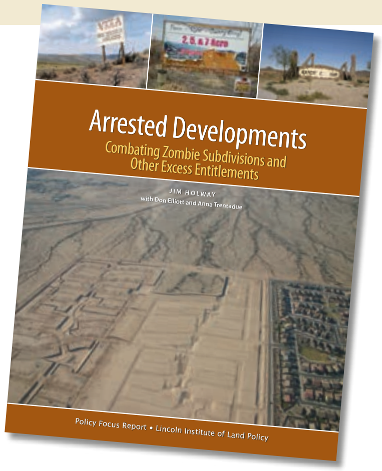
New Lincoln Institute Policy Focus Report

Arrested Developments: Combating Zombie Subdivisions and Other Excess Entitlements

In the U.S. Intermountain West, the real estate boom and bust of the 2000s left many residential development projects incomplete. Across many of the region's counties, the rate of vacant subdivision parcels ranges from around 15 percent to two-thirds of all lots. From paper plats to partially built subdivisions that require road maintenance and other infrastructure without contributing to the local tax base as planned, excess development entitlements—the rights, granted by local government, to develop land—are compromising the quality of life, distorting growth patterns and real estate markets, and diminishing fiscal health in their communities.

This policy focus report, produced in conjunction with the Sonoran Institute, provides information and tools to help cities and counties struggling with problems that stem from arrested developments in their communities, from health and safety hazards to blight, impacts on existing lot owners, fiscal threats, fragmented development patterns, overcommitted natural resources, and market flooding and distortions. Although the research focuses on the eight U.S. Intermountain West states—Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming—the policy recommendations and best practices are applicable nationwide.

The authors begin by exploring the economic context that fostered the entitlement of so much land in advance of market demand for new housing, as well as the framework of state and local laws within which local governments manage and regulate land development. They then draw on case studies, lessons shared by experts during several workshops, survey results, and data analysis to identify the challenges municipalities typically face when they attempt to address excess development entitlements. Finally, they recommend treatment and prevention measures—including a model process to help communities start addressing problems in their jurisdictions.



Arrested Developments: Combating Zombie Subdivisions and Other Excess Entitlements
Jim Holway with Don Elliott and Anna Trentadue
Policy Focus Report/2014/60 pages/ Paper $15.00/PDF free online/ISBN: 978-1-55844-286-3/Code PF037

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The authors suggest that local governments should build a solid foundation of policies, laws, and programs, in order to facilitate recovery, create more sustainable growth scenarios, improve property values, and pursue land and habitat conservation where those land uses are more appropriate. They should also ensure they have mechanisms in place to adapt and adjust to evolving market conditions. Communities likely to face significant growth pressures would be well served by development management policies that help to align new entitlements and infrastructure investments with evolving market demands. Cities and towns already coping with distressed subdivisions should summon a willingness to reconsider past approvals and projects and to acknowledge problems.

The report concludes with nine policy recommendations.

- Adopt new state enabling authority to ensure local governments have the tools and guidance they need.
- Prepare and revise community comprehensive plans and entitlement strategies as a foundation for local action.
- Adopt enhanced procedures for development approvals and ensure policies are up to date and consistently applied.
- Adapt and adjust policy approaches to market conditions.
- Rationalize development assurances to ensure they are practical, affordable, and enforceable.
- Establish mechanisms to ensure development pays its share of costs.
- Serve as a facilitator and pursue public-private partnerships to forge creative and sustainable solutions.
- Establish systems for monitoring, tracking, and analyzing development data to enable effective and targeted solutions to specific subdivisions.
- Build community capacity and maintain the necessary political will to take and sustain policy action.

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Implementación de la Recuperación de Plusvalías en América Latina: Políticas e Instrumentos para el Desarrollo Urbano

(Implementing Value Capture in Latin America: Policies and Tools for Urban Development)

Now available in Spanish, this policy focus report examines policies and tools to facilitate the implementation of value capture in Latin America. Urbanization in Latin America is associated with strong pressure for the supply of serviced land, resulting in significant changes in land values that are distributed unequally among landowners and other stakeholders. Conventional fiscal policies and instruments largely neglect how the costs of providing urban infrastructure and services are socialized, and how their benefits are privatized.

The notion of value capture is to mobilize for the benefit of the community at large some or all the land value increments (unearned income or plusvalías) generated by the actions of others besides the landowner, such as from public investments in infrastructure or administrative changes in land use norms and regulations. Many countries in Latin America, notably Brazil and Colombia, have passed legislation that supports value capture principles, and some jurisdictions have applied this potentially powerful financing mechanism by using a variety of locally adapted tools and instruments.

This discussion of the concept of value capture explains its justification and increasing popularity, provides a brief review of its antecedents in Latin America and elsewhere around the world, and illustrates its many forms and longstanding presence in the urban planning agenda. The reasons for its growing popularity are manifold: regional economic stabilization and fiscal decentralization; more progressive strategies for urban planning and management; re-democratization, increased social awareness, and demands for equitable public policy responses; changing attitudes toward privatization and public-private partnerships; the influence of multilateral agencies; and pragmatic considerations to capture land value increments to raise funds for local community needs.

The report examines a variety of specific instruments and applications in municipalities throughout the region under three categories: property taxation and betterment contributions; exactions and other direct negotiations for charges for building rights or the transfer of development rights; and large-scale approaches such as development of public land through privatization or acquisition, land readjustment, and public auctions of bonds for purchasing building rights. It concludes with a summary of lessons learned and recommends steps that can be taken in three spheres:

Learn from Implementation Experiences: While value capture charges in theory are neutral regarding land use and should fall entirely on landowners, in practice successful implementation demands management skills to deal with many complex factors and diverse stakeholders. In addition it requires proper understanding of land market conditions, comprehensive property monitoring systems, a fluid dialogue among fiscal, planning, and judicial entities, and the political resolve of local government leaders.

Increase Knowledge about Theory and Practice: Conducting research, documenting and disseminating implementation experiences, and providing evidence about how value capture policies work on the ground are essential to overcome the disjunction between rhetoric and practice and to change the behavior and attitudes of public officials, landowners, and the community at large.

Promote Greater Public Understanding and Participation: Land value increments are captured more successfully from landowners and other stakeholders who perceive they are receiving greater benefits from a public intervention than those accruing from business as usual. Furthermore, value capture tools are more likely to succeed when used to solve a locally recognized problem.

Implementación de la Recuperación de Plusvalías en América Latina: Políticas e Instrumentos para el Desarrollo Urbano
(Implementing Value Capture in Latin America: Policies and Tools for Urban Development)
Martim O. Smolka
2014/76 pages/Paper/$15.00/ISBN: 978-1-55844-293-1/Code: PF035SP

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Announcement

Gregory K. Ingram, president and chief executive of the Lincoln Institute of Land Policy since 2005, announced his plans to leave the position this coming summer. Ingram, an economist, was Director General of Evaluation at the World Bank before coming to the Lincoln Institute. He will return to Washington, D.C., where he plans to remain professionally active.

"Leading this organization has been a privilege," he said. "The Lincoln Institute has an excellent staff, supportive board, ample resources, and a mission that focuses on some of the most relevant and pressing issues of our time. It is a policy analyst's paradise."

"Greg Ingram has sharpened our focus and maintained scholarly rigor in a way that has strengthened our research and programs, and we are all extremely grateful," said Kathryn J. Lincoln, chief investment officer and chairman of the board of the Lincoln Institute. "Now we must find new leadership to take this institution to the next level yet again."

A search committee has been named to begin the process of finding a successor. Russell Reynolds Associates, a premier provider of senior-level executive search and assessment with a commitment to the nonprofit arena, has been retained to assist in identifying a high-level, distinctive, and diverse field of candidates. Interested parties can contact the team leading the search at *lincolninstitute@russellreynolds.com*.

PROGRAM *calendar*

Programs in Latin America

WEDNESDAY–THURSDAY, FEBRUARY 19–20
Quito, Ecuador
Workshop on Fundamental Principles of Urban Development
Martim Smolka, Lincoln Institute of Land Policy

TUESDAY–FRIDAY MAY 6–9
Panama City, Panama
Symposium on Land Policy Education in Latin America
Martim Smolka and Diego Erba, Lincoln Institute of Land Policy

TUESDAY–FRIDAY MAY 27–30
Mexico (City TBD)
Professional Development Course on Methods and Techniques for Land Market Analysis
Martim Smolka and Diego Erba, Lincoln Institute of Land Policy

2014 Lincoln Lecture Series

The annual lecture series highlights the work of scholars and practitioners who are involved in research and education programs sponsored by the Lincoln Institute. The lectures are presented at Lincoln House, 113 Brattle Street, Cambridge, Massachusetts, beginning at 12 p.m. (lunch is provided). Consult the Lincoln Institute website for information about other dates, speakers, and lecture topics. The programs are free, but pre-registration is required at the website (*www.lincoln inst.edu/news/lectures.asp*).

TUESDAY, FEBRUARY 11, 2014
The Global Emergence Of Private Land Conservation
Peter R. Stein & Laura Johnson

Peter R. Stein, the 2012–2013 Kingsbury Browne Fellow at the Lincoln Institute and a managing director at The Lyme Timber Company, will survey innovations in land conservation from around the world. Laura Johnson, immediate past president of Mass Audubon, will offer brief commentary.

WEDNESDAY, MARCH 5, 2014
Detroit Bankruptcy and the Eroding Property Tax Base
Mark Skidmore

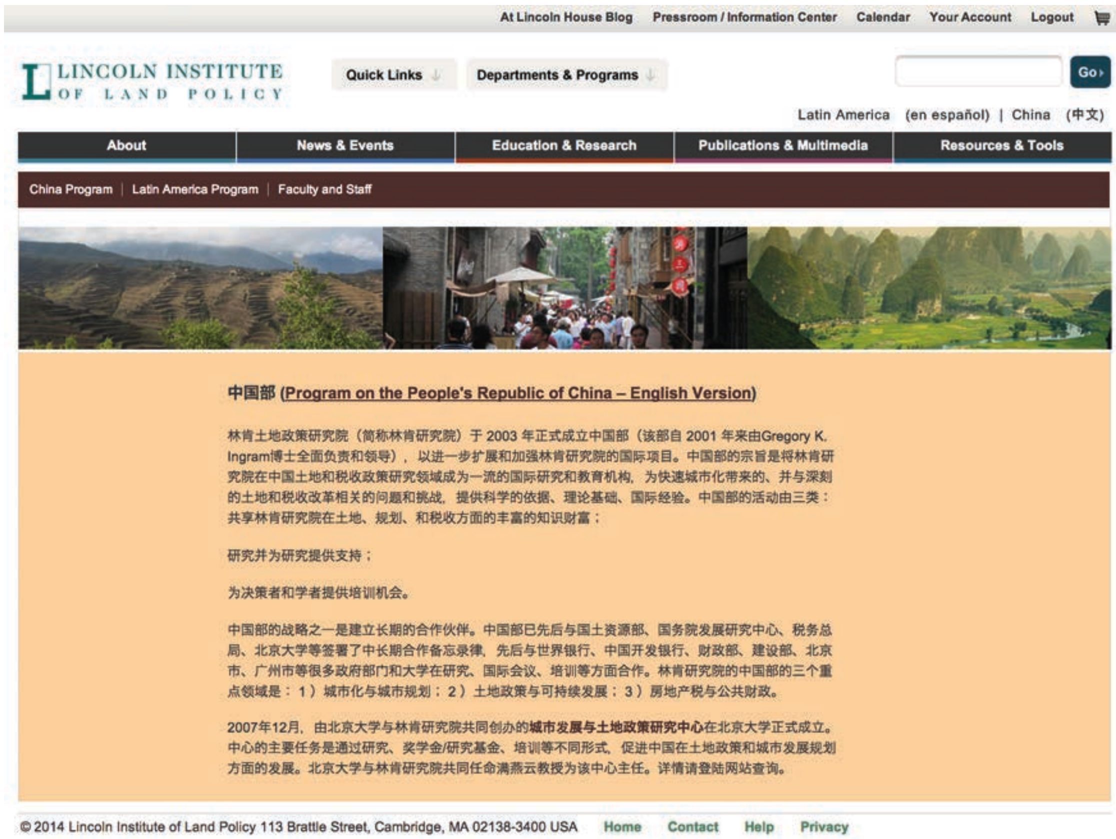
Detroit is now in the midst of bankruptcy proceedings. While there are many causes and circumstances that have contributed to dire fiscal conditions in the city, the erosion of the property tax base will continue to be critical. A number of factors have led to significant tax base erosion: regional economic decline, policies, tax delinquency, and tax foreclosure. This lecture will address these issues and recent developments in Detroit, and consider important changes that could improve the city's overall economic and fiscal health as it emerges from bankruptcy.

TUESDAY, MARCH 25, 2014
The Design Dividend: An Integrated Approach to Climate Resilience
Helen Lochhead

In the wake of Hurricane Sandy, with more frequent extreme weather events and rising sea level in progress, the vulnerability of coastal cities and towns has become a matter of urgency. But out of disasters can come opportunities for innovation. Post-Sandy, a range of new initiatives, tools, policies, governance frameworks, and incentives are being tested, including Rebuild by Design—the Department of Housing and Urban Development's competition to promote recovery in communities rebounding from the superstorm. Design is seen as a key tool for dealing with complex problems wrought by climate change by creating integrated strategies to build resilience, sustainability, and liveability. Using the Rebuild by Design process as a case study, Helen Lochhead will consider the possibilities for such a process to deliver projects and approaches that can be implemented and brought to scale. An Australian architect and urban and landscape designer, Lochhead is currently a Lincoln/Loeb Fellow at the Graduate School of Design at Harvard University and the Lincoln Institute of Land Policy. Most recently, she has been the Executive Director of Place Development at Sydney Harbour Foreshore Authority. She is also an adjunct professor at Sydney University.

CHINA AND LATIN AMERICA

Recent changes in navigation at *www.lincolninst.edu* will enhance the user experience around our international programs. Users can now click on content in Spanish and Chinese directly from the homepage. Pages for the Program on Latin America and the Caribbean, under the direction of Martim Smolka, include extensive content in Spanish and Portuguese. And pages for the Program on the People's Republic of China, under the direction of Zhi Liu, have been recently expanded.



New left-side navigation provides easy access to the activities of the China program and the Lincoln Institute-Peking University Center for Urban Development and Land Policy in Beijing, which recently celebrated its fifth year in operation. A new filter tool allows users to pull up books, Policy Focus Reports, working papers, and other publications related to China.

The China program explores issues and challenges relating to land and taxation policy in China, with a focus on rapid urban development; public finance and tax policy, including a potential expansion of the property tax; and sustainability and environmental issues.

The Latin America program promotes research and offers training on key topics related to land use in 19 countries throughout Latin America and the Caribbean, including urban planning, public finance and value capture, informal settlement, and property tax systems.

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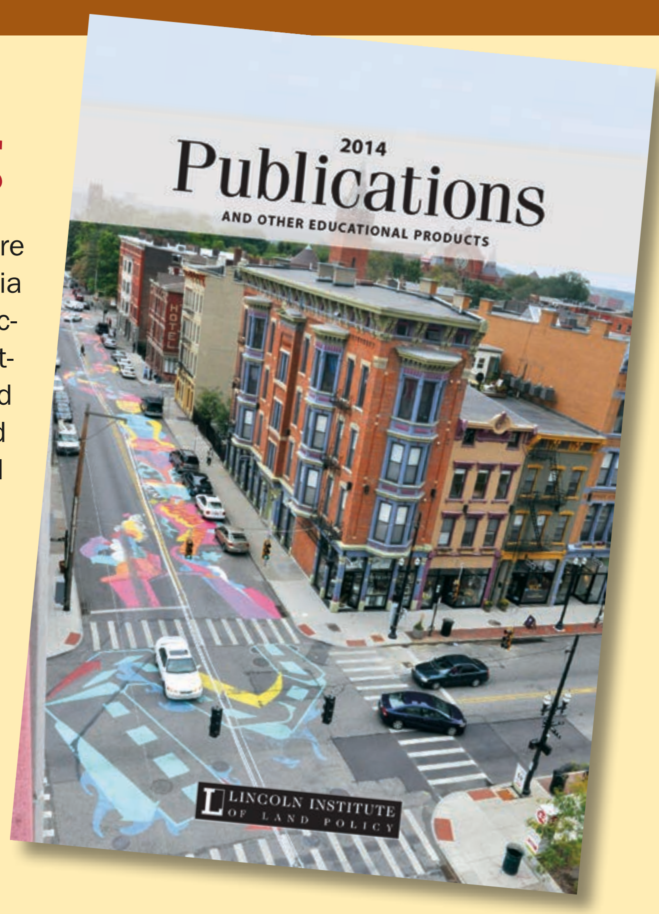

The Lincoln Institute's 2014 Publications catalog features more than 100 books, ebooks, policy focus reports, and multimedia resources. These publications represent the work of Institute faculty, fellows, and associates who are researching and reporting on the following topics: property taxation, valuation, 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 website, and we encourage their adoption for academic courses and other educational meetings. Follow the instructions for requesting exam copies on the Publications homepage. The entire catalog is posted on the website for free downloading. To request a printed copy of the catalog, send your complete mailing address to *help@lincolninst.edu*.

www.lincolninst.edu/pubs