

Regulatory Compliance and the Structure of Individual Property Rights in High Risk Areas

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Abstract

Communities facing a substantial risk of natural disaster require individual landowner cooperation with detailed building codes to ensure safety. Beyond increasing public expenditures on enforcement action, I propose that limitations on personal property ownership through increases in minimum parcel sizes and restrictive covenants can also facilitate individual compliance with regulation. Deployment of such solutions in existing residential property will require substantial use of eminent domain and political will, most likely available in the immediate aftermath of a natural disaster.

Introduction

The tremendous loss of life and property damage resulting from natural disasters invite calls for better prevention and mitigation efforts prior to the next disaster. Public pressure generates large-scale public projects such as dams and levees, but government agencies also respond by regulating private actors. Building codes, taxes/fees, and zoning restrictions are also tools by which the government compels better preparedness in individuals. A comprehensive approach that incorporates federal agencies, state and regional actors, and individual citizens is essential in developing safer, disaster-resistant communities.¹

Inducing individual property owner compliance is an ongoing challenge for the government. Government agencies can exert direct control via regulatory enforcement officials—building inspectors, for example. They can also leverage private entities, such as insurance companies, as enforcement agents. Insurance companies can act as “private” regulation, promulgating restrictions on insured parties. Such restrictions may be determined to be in the insurance company’s best interest, but also may be dictated by public regulatory bodies. Despite the potential delegation, however, government agencies still must be vigilant in enforcement over both the insurance companies and the property owners.²

Beyond the role of such enforcement agents, this paper will explore the potential of alternative property ownership structures in facilitating regulatory enforcement. The

¹ Daniel Farber and Jim Chen, *Disasters and the Law: Katrina and Beyond* (New York: Aspen Publishers, 2006). Pg 201, also Laurie Pearce, "Disaster Management and Community Planning, and Public Participation: How to Achieve Sustainable Hazard Mitigation," *Natural Hazards* 28.2-3 (2004).

² GAO, "Flood Insurance Extent of Noncompliance with Purchase Requirements Is Unknown," (2002)

structural arrangement of property rights can have a significant, overlooked influence on the monitoring and enforcement of regulation. This paper makes the basic assumption that compliance with such regulations will improve responsiveness to disaster preparation. I will begin with a societal view of individual ownership of property in the face of natural disasters. I will then move to restricting parcel sizes in zoning as a possible structural change to facilitate code compliance. Finally, I look at homeowner associations as a potentially more palatable political alternative. I do not address the appropriateness of specific building codes or disaster regulations, and rescue, recovery, and other post-disaster issues are not under consideration.

I. The Importance of Regulatory Enforcement

In combination with levees and floodwalls, the construction and maintenance of individual residential structures play a vital role in minimizing loss of life and property in hurricane conditions. Structural failures not only put the occupants at risk, but they are also the source of fast moving debris that places other buildings and lives in jeopardy.³ Prior to Hurricane Katrina, residential building codes existed that could have prevented much damage.⁴ Nonetheless, improperly elevated homes,⁵ insufficient foundation

³ National Institute of Standards and Technology, Performance of Physical Structures in Hurricane Katrina and Hurricane Rita: A Reconnaissance Report. NIST Technical Note 1476. June 2006. at xxxiii.

⁴ Id. at 171.

⁵ Id. at 146, 150.

anchors,⁶ poor roofing installation,⁷ and corroded framing and bracing systems⁸ all existed in violation of those codes and compounded the hurricane's damage.

The codes were and are still considered realistic, but they require strict enforcement.⁹ Prior to the actual disaster, individuals have difficulty properly managing their risk exposure. Proper management first requires accurate, localized information about the level of risk, and such information can be costly and difficult. Even when government programs like NFIP help homeowners obtain relevant information regarding their individual risk for flooding, some communities actively discourage obtaining such information for fear of reducing property values.¹⁰

Even with adequate information, cognitive limitations may prevent individuals from rationally understanding and responding to the risk.¹¹ Natural disaster risk tends to be extremely low frequency yet catastrophic in damage, a particularly challenging scenario for comprehension.¹² People are better at making repeated decisions based on common events; disasters are infrequent enough to distort perceptions of appropriate preparation.

Resource availability, whether actual or perceived, also plays a role in distorting individual preparation. Residents in high-risk areas may simply lack adequate personal resources to prepare for disaster.¹³ Others who are not struggling financially may believe

⁶ Id. at 153-154, 157-158.

⁷ Id. at 159-160.

⁸ Id. at 158.

⁹ Id. at xxxiv.

¹⁰ James M. Holway; Raymond J. Burby, The Effects of Floodplain Development Controls on Residential Land Values, *Land Economics*, Vol. 66, No. 3, Private Markets, Public Decisions: An Assessment of Local Land-Use Controls for the 1990s. (Aug., 1990), pp. 259-271.

¹¹ William A. Boettcher, "The Prospects for Prospect Theory: An Empirical Evaluation of International Relations Applications of Framing and Loss Aversion," *Political Psychology* 25.3 (2004).

¹² Dwight Jaffee, presentation at UC Berkeley on 3/12/07.

¹³ Farber at 110.

that the federal government will reliably bail them out in case of a disaster, and thus insufficiently commit personal resources in response.¹⁴ Even government programs that increase awareness of disaster risk may distort individual preparation. For example, the National Flood Insurance Program (NFIP) subsidizes certain residents of flood-prone areas at below-market rates. Some recipients of this insurance fail to take adequate measures to prevent repeated flood damage of their homes, as they know the Federal government will compensate them for any losses.¹⁵

The limited ability of individuals to respond properly to the risk of natural disaster highlights the need for enforcement of building codes and land use regulations. Government determination of these standards offsets difficulties in individual discretion, but individuals may still be limited in their comprehension and willingness to comply with such standards for the above reasons. As the severity and complexity of such regulations increases, a corresponding increase in regulatory enforcement is required. The NFIP, for example, incorporates an incentive structure for policyholders to mitigate flood risks.¹⁶

In Ellickson's terminology for land use policy evaluation, this paper emphasizes the administrative costs of policy as opposed to the nuisance and prevention costs.¹⁷ The natural response to a risk poorly understood by the public at large is detailed, specific declaration of acceptable and unacceptable land use. While there are many arguments regarding the capriciousness and unresponsiveness of zoning as land use policy,¹⁸ this

¹⁴ Id at 161.

¹⁵ Rawle O. King, "Federal Flood Insurance: The Repetitive Loss Problem," RL32972 (CRS, 2005).

¹⁶ Id.

¹⁷ Robert C. Ellickson, *Alternatives to Zoning: Covenants, Nuisance Rules, and Fines as Land Use Controls*. 40 *Univ. of Chicago L.Rev.* 691, 691 (1973).

¹⁸ Id.

paper focuses upon facilitating the enforcement of regulation through the structure of individual property rights.

II. Increase of Minimum Parcel Size

Beyond restricting land use in high-risk areas is the potentially overlooked benefits of minimum parcel sizes in zoning. The more common zoning restriction is a density restriction, an attempt to prevent high-density residence in risky areas. In contrast, minimum parcel size restricts the subdivision of land ownership in fee simple. On the surface, mandating larger lot sizes does not appear to directly address any specific natural disaster risk. A hurricane appears to be equally destructive whether one person owns a ten-acre lot or ten people own ten adjacent one-acre lots. Nonetheless, in parallel with other land use restrictions, an increase of minimum parcel size can aid in improving individual responsiveness to disaster risk.

Given that the amount of land in a particular locality is generally fixed, an increase in minimum parcel size effectively reduces the total number of fee simple landowners. This smaller pool of landowners may lease out portions of their property, but an essential component of this minimum parcel size proposal is that the landowners in fee simple not be able to divest final responsibility for construction and maintenance of buildings on their property.

Efficiency in Regulatory Oversight: The Probability of Detection

If the city is constrained in the level of spending for regulatory enforcement, the smaller pool of total fee simple landowners can improve the effectiveness of enforcement resources. Regulatory officials may be able to target code violations more efficiently and work more closely with owners.

Traditional rational enforcement theory explains both the level of enforcement effort and its predicted effectiveness in ensuring compliance. Potential offenders decide upon non-compliance by weighing the cost of compliance against expected punishment.¹⁹ Expected punishment is the probability of punishment multiplied by the magnitude of the punishment.²⁰ Modern research, however, generally shows that the magnitude of the punishment is not as important as the probability of punishment.²¹ Thus, increasing the probability of detection of noncompliance is an important goal. Reducing the total number of fee simple landowners can increase this probability.

Assume we have a city with 1,000,000 acres of land. Each one acre lot holds a single building, and each single acre lot, along with the building, is owned in fee simple by a unique owner. Thus, we have one million owners. Let us further assume that 1% of the owners are bad apples. These bad apples will not expend the appropriate resources to maintain their buildings to code. For simplicity's sake, we assume that any building the

¹⁹ Stigler, George J. "The Optimum Enforcement of Laws." *The Journal of Political Economy* 78.3 at 527 (1970) .

²⁰ *Id.*

²¹ See John T. Scholz & Wayne B. Gray, OSHA Enforcement and Workplace Injuries: A Behavioral Approach to Risk Assessment, 3 *J. RISK & UNCERTAINTY* 283 (1990); Andreoni, James. "Reasonable Doubt and the Optimal Magnitude of Fines: Should the Penalty Fit the Crime?" *The RAND Journal of Economics* 22.3 (1991): 385-95.

bad apples own are not in compliance. In other words, 10,000 buildings are not in compliance.

With limited city resources for regulatory enforcement, we assume that the city can only inspect 20,000 buildings per year, and that these inspections are entirely at random. Any particular building in the city only has a 2% chance of being inspected in a particular year. Since any building has a 1% of being owned by a bad apple, on average, the city will only catch 200 buildings not in compliance.

Now, let us look at the same city with a minimum parcel size of 10 acres. We still have the original one million acres of land, each acre containing a single building. There are, however, now 100,000 lots of 10 acres each. Each lot contains 10 buildings. Assuming we still have individual owners for each lot, there are now 100,000 owners. At the same bad apple rate, 1%, there is still the same number of buildings out of compliance, 10,000.

If the inspectors randomly sample among all of the lots in the city, they can now improve their discovery of non-compliant buildings. Upon the discovery of any non-compliant building, they can next target other buildings on the same lot, as the buildings share a single owner. If the inspectors initially target only one building on each lot, they can effectively cover nearly 20% of the lots.²² This is a nine-fold increase in the number of non-compliant buildings detected.

²² Assume there are X inspections in the first round, and Y follow-up inspections on other buildings that result from a non-compliant detection in the first round. There are Z non-compliant buildings detected in the first round, and T is the total number of non-compliant buildings detected. Thus,

$$X * 1\% = Z$$

$$Y = 9 * Z$$

$$T = Z * 10$$

$$X + Y = 20,000$$

The effectiveness of this regime depends upon the prevalence of code violations. If, in the extreme case, there is only one building out of compliance in the entire city, this plan will be completely ineffective at improving the efficiency of inspections. Less narrowly, this plan's effectiveness relies upon 1) variation in compliance, and 2) significance in variation.

The first requirement is the assumption that owners vary in their willingness and/or capability to comply with building and land use codes. If all owners act identically, this plan is ineffective. While this does not seem to be a difficult assumption, there may be conditions in which it does not apply. If the cost of compliance is exorbitant, it may be that no owners comply. If the pool of landowners is small enough, there may be collusive behavior. This may be offset, however, by the increased time and attention that a regulator can spend with each landowner. Generally speaking, we would expect to see some variation in compliance.

This variation must also be sufficiently significant, the second requirement. For this plan to be effective, the variation must result in owner responsibility for multiple violations. The above model assumes that all of the buildings owned by a bad apple are out of compliance, an extreme and unnecessary assumption. There must be at least a chance, however, of an owner having more than one building out of compliance—otherwise, additional scrutiny on the owner will not yield further violations. This

$$\begin{aligned} 0.01X &= Y/9 = Z \\ 0.01X &= (20,000-X)/9 = Z \\ 0.09X &= 20,000-X \\ 1.09X &= 20,000 \\ X &= 18,349 \\ Z &= 183 \\ \text{Total} &= 1,834 \end{aligned}$$

requirement will more likely be met if there are stringent building codes and substantially larger parcel sizes.

Improving Quality of Regulatory Compliance

Limiting the number of owners in the area can also improve the quality of compliance with regulators. Rather than the artificial good/bad apple distinction drawn earlier, a building owner's compliance with regulation lies upon a continuum. Good enforcement officials develop relationships with the regulated parties to improve compliance.²³ Given the limited time and resources of enforcement officials, a smaller number of owners can allow each official to spend more time with each owner, improving the individual relationships. These individual relationships may help owners develop more cost-effective, customized solutions to their specific properties. Property owners may also enjoy some economies of scale in ascertaining the relevant information and complying with public standards. The countervailing concern, however, is the increased concentration of power, risk of collusive owner behavior, and regulatory capture.²⁴

²³ Eugene Bardach and Robert Kagan, Going by the Book: The Problem of Regulatory Unreasonableness (New Brunswick: Transaction Publishers, 2002).pg 130.

²⁴ See George J. Stigler, "The Theory of Economic Regulation," The Bell Journal of Economics and Management Science 2.1 (1971). Jean-Jacques Laffont and Jean Tirole, "The Politics of Government Decision-Making: A Theory of Regulatory Capture," The Quarterly Journal of Economics 106.4 (1991). At 1090. Also Mancur Olson, The Logic of Collective Action: Public Goods and the Theory of Groups, Harvard Economic Studies (Cambridge, Massachusetts: Harvard University Press, 1965).

Increase in Independent Risk Management

The increase in minimum parcel size could also increase independent compliance & information seeking. The owners of the larger parcels will, out of necessity, have comparatively more wealth. Beyond compliance with the regulatory regime, we may predict that wealthier owners may have higher levels of education and be more willing to pay for information or analysis in evaluating the extent of risk exposure.²⁵ With the additional information and resources, they may be willing to move beyond the requirements of the regulatory regime by implementing superior disaster preparation and mitigation plans. Furthermore, larger owners may also fear bad publicity and be more susceptible to media and public pressure to minimize risk.

Depending on the magnitude of the parcel size increase, however, the property owners may not necessarily react in such a fashion. If the increase in size is relatively small, owners may simply borrow more to make their purchases. If the parcel size increase drives excessive use of credit, some owners may actually have less resources to apply towards regulatory compliance.

Reduction in Zoning Complexity

An increase in minimum parcel size can reduce the overall level of zoning complexity. Given the same total amount of land, applying a larger minimum parcel size will reduce the number of total parcels in the same area. The resulting reduction in

²⁵ Deon Filmer and Lant Pritchett, "The Effect of Household Wealth on Educational Attainment: Evidence from 35 Countries," Population and Development Review 25.1 (1999).

granularity of regulation can lower the administrative costs of monitoring and recording land use regulations. If, however, zoning boards attempt to control the use of portions of a parcel (i.e., regulating the use of the northern third of a parcel), there may not be substantial administrative gains.

Reduced flexibility in parcel size, however, can lead to inefficient land use and loss of property values.²⁶ Smaller parcel sizes allow greater specificity for how land may be used. Larger parcel sizes may correspond to a decrease in efficient land usage. In moving from a one acre minimum lot size to a ten acre lot size, we may find that four of the ten acres were of superior elevation and not at a similar risk of flooding as the other six acres. By zoning the entire ten acres as a single parcel, we may rule out some use of the four acres due to the flood risk of the other six. Nonetheless, smaller parcels are not necessarily more efficient; larger parcels can be more efficient under certain circumstances.²⁷

Despite the potential efficiency losses, however, the potential disaster losses to the general area should dominate the decision. Furthermore, larger minimum parcel sizes may marginally reduce the cost of obtaining risk data for the land due to the reduced need for accuracy.

Implementation

Substantial increases in minimum parcel size in an already developed area will require extensive use of eminent domain. Given the above justifications and the broad

²⁶ David Brownstone and Arthur De Vany, "Zoning, Returns to Scale, and the Value of Undeveloped Land," *The Review of Economics and Statistics* 73.4 (1991).

²⁷ Id.

discretion announced in *Kelo v City of New London*,²⁸ such application of eminent domain should be upheld as constitutional. The greater challenge will be political feasibility. The government will have to buy out contiguous parcels and repackage them for sale as a larger unit. If there are efficiency losses due to the larger parcel size, the government may lose money in the process, in addition to the transactional costs of such purchase. While a few of the prior property owners will be sufficiently wealthy to purchase the new, enlarged parcel, others may still be able to gain some possession of their previous parcel through leasehold. Nonetheless, there will certainly be owners who will now be denied fee simple ownership. Such expansive taking of property is likely to be politically feasible only after a natural disaster has wiped out much of the present usability of targeted property. The necessary takings can be tied to victim compensation—the government buying the newly distressed property in addition to compensating for other losses.

Implementation of a minimum parcel size plan in a non-developed area will be easier and likely will not constitute a taking. Under *Lucas v. South Carolina Coastal Council*, regulation would constitute a taking requiring compensation if it causes an owner suffer physical “invasion” of property, or if the regulation denies all economically beneficial or productive use of land.²⁹ Increasing the minimum parcel size is not similar to an easement and does not constitute any invasion of property. As to economically beneficial or productive use, the minimum parcel size does not constrain the developer’s ability to build on the land, but rather limits the total potential purchasers in fee simple. Residences could still be subdivided as leaseholds smaller than the minimum parcel size.

²⁸ 545 U.S. 469 (2005)

²⁹ *Lucas v. South Carolina Coastal Council*, 505 US 1003 (1992)

Concerns

The substantial increase in minimum parcel size will result in a dramatically different pattern of property ownership in the area. Individuals may not necessarily be displaced from possession due to the possibility of leaseholds, and, to the extent that a non-occupying landowner can manage building code compliance, leaseholds should not reduce efficiency in compliance. Building codes relating to exterior structure should fall into this category. Nonetheless, restructuring ownership in a previously developed area will still be contentious.

The parcel size increase may drive co-ownership of property. Individuals finding themselves unable to afford one of the large parcels may band together, perhaps with family, in collective purchases. Co-owners may respond differently due to collective action issues³⁰. Due to the risks, complexity, and commitment associated with co-ownership, it is unlikely there will be great changes for marginal cases. We will return to co-ownership in the later section on home owners' associations.

More likely, the new owners of fee simple estates will likely be higher net worth individuals and corporations. The impact on the poorest and renters is unclear, but smaller property owners, while receiving monetary compensation, will no longer be able to own real property in fee simple. President Bush has pushed home ownership as a policy goal, and denying such opportunity may seem extremely un-American.³¹ The

³⁰ Rod Dobell and Ted Parson, "Collective Decisions Involving Risk: A Literature Review," (1986).

³¹ Whitehouse Policies in Focus: Homeownership. Obtained online at <http://www.whitehouse.gov/infocus/homeownership/> on April 21, 2007.

reduction in the potential for land-ownership may also be viewed as an unreasonable concentration of power.

Increases in minimum parcel size may also trigger sprawl, leading to population of areas that would not have otherwise been occupied.³² This is rather unlikely, as it would reflect an exceptionally strong preference for fee simple ownership of real property. The preference would have to outweigh the resident's ability to pay for ownership and the alternative of leasing must be perceived as extremely unattractive. Nonetheless, if it were to occur, such sprawl could be costly if tied to a growth of transportation and utility networks. More likely, though, residents are not as concerned with fee simple ownership and would be willing to consider alternative residential arrangements. Furthermore, such sprawl may be desirable if the increases in minimum parcel size are carefully targeted toward high risk areas, as the policy would then actively discourage residence in the appropriate places.

The role of parcel size is important in these narrow cases of areas that are at high risk of natural disaster. In the same way that we do not encourage broad investment in junk bonds or high risk securities, we should not be encouraging small home owners to buy into high risk properties.

Overall, a substantial increase in minimum parcel sizes may be appropriate in extremely high risk areas, but it also leads to a potentially more feasible solution: restrictive covenants running with the land.

³² Ellickson at 695.

III. Homeowner Associations & Restrictive Covenants

Homeowner associations (HOA) may be a property right restriction that is more palatable and will still lead to improvements in risk management and regulatory enforcement. HOAs are a form of collective ownership that may lead to some of the aforementioned benefits of increased minimum parcel size. Interestingly, Nugent & Sanchez observed a shift towards collective property rights as a historical response to risk in both the Sudan and the American West.³³ These associations can be seen as a form of private regulation that can work in conjunction with public oversight. They might even be used as a direct agent for public regulation, with all public regulatory efforts being funneled through the association. There is substantial literature on the benefits and costs of HOAs³⁴; this section will focus narrowly upon their potential in addressing disaster preparedness.

Much of new residential construction in the U.S. is being linked together via homeowner associations & their corresponding covenants.³⁵ Homeowners can own their real property in fee simple, but these properties are burdened with servitudes benefiting other similar properties in a defined neighborhood. These servitudes are commonly referred to as the CC&Rs, the covenants, conditions, and restrictions pertaining to the property. A homeowner association typically administers and manages the web of responsibilities among the various properties, often including common areas, insurance, and security.

³³ Jeffrey B. Nugent and Nicolas Sanchez, "Common Property Rights as an Endogenous Response to Risk," American Journal of Agricultural Economics 80.3 (1998).

³⁴ Robert H. Nelson, "Privatizing the Neighborhood: A Proposal to Replace Zoning with Private Collective Property Rights to Existing Neighborhoods," George Mason Law Review 7.4 (1999).

³⁵ Id.

In comparison with public regulation, the empirical evidence is unclear as to the efficiency of HOA regulation.³⁶ This is due in part to the historic differences in regulatory goals; HOAs are considered private, voluntary associations that are not bound by constitutional limitations.³⁷ As such, while they may act like a private government, the regulations enforced can be much more stringent and draconian than would be tolerated in a constitutional republic.³⁸ Thus, the costs of HOA regulation may be substantially higher, but those costs might simply be reflective of the greater regulatory burden the HOA has selected. While there may be some interesting future research directly comparing regulatory efficiency, I will focus on cost comparison.

Cost Shifting

Public regulators operating with limited budgets can shift some of the costs of monitoring and administration to the homeowner associations. HOAs, however, traditionally have been representative of the individual homeowners' interests; they choose regulations that help maximize the value and enjoyment of the concerned properties. These homeowners may undervalue disaster preparedness,³⁹ and monitoring for disaster-related building codes may not be a priority. As such, public regulators must apply penalties directly against the HOA if they find any particular owner to be out of

³⁶ See Chen, Simon C.Y., and Chris J. Webster. "Homeowners Associations, Collective Action and the Costs of Private Governance." *Housing Studies* 20.2 (2005): 205-20.

³⁷ McCabe, Barbara Coyle. "The Rules Are Different Here: An Institutional Comparison of Cities and Homeowners Associations." *Administration Society* 37.4 (2005): 404-25.

³⁸ *Id.*

³⁹ See Boetcher, *supra*.

compliance. Such collective punishments may be seen as unfair,⁴⁰ but they will provide incentive for the association to prioritize the concern. Furthermore, HOAs can establish covenants to distribute the costs of fines to the most culpable parties. Such distributive efforts will not remove the incentive for HOAs to take enforcement action, as there still are administrative costs associated with handing out fines.

Furthermore, the HOA shares the similar benefit of improved quality of oversight, as the HOA provides a central contact point for public regulatory officials. A regulatory official does not have to establish and build a relationship with each of the individual neighborhood property owners, but can instead negotiate directly with the HOA.

Lower Costs of Private Local Inspection

The cost for HOAs to inspect and monitor for disaster-related code violations may be lower in comparison to public regulators. Due to the HOA's geographical and relational proximity to the covered properties, over time it should develop expertise regarding property compliance. Given the homeowners' interests in protecting their property values, there will be pressure upon the HOA to insure compliance with private regulation. Likely much of the private regulation will have nothing to do with disaster preparedness, but rather the upkeep of buildings and the color of paint. Nonetheless, enforcement of such private regulation will dovetail to some extent with oversight regarding public code compliance. A HOA administrator, while checking on exterior paint colors, can also take note of properly secured roofs, walls, and windows.

⁴⁰ Levinson, Daryl J., "Collective Sanctions" (March 24, 2003). NYU Law School, Public Law Research Paper No. 57; and NYU, Ctr for Law and Business Research Paper No. 03-04. Available at SSRN: <http://ssrn.com/abstract=389980>.

While a HOA will likely not have the same public code expertise as a public regulatory official, it will have detailed familiarity with the neighborhood properties that will grow over time. The combination of public code expertise and localized familiarity could also be gained by contracting out for inspection. As long as the HOA does exert some pressure over the neighborhood properties to push public regulatory compliance, public regulatory officials can gain some efficiency in treating the neighborhood properties as though they shared ownership. Furthermore, the influence of group decision-making over management may be more responsive to risk.⁴¹

Implementation & Challenges

Implementation of HOAs is relatively straightforward for new planned developments, but there are many pre-existing neighborhoods in disaster-prone areas. Without substantial reforms in state laws surrounding real covenants and homeowner associations, bringing existing neighborhoods into the control of a HOA will likely require significant eminent domain efforts. Application of real covenants often requires both horizontal and vertical privity. Such privity requirements are easily met when a developer is subdividing new construction. For an existing neighborhood, however, the government will likely have to acquire title to the properties incorporating the neighborhood, and then it can proceed to resell those properties, but now with the burden of the appropriate covenants. Similar to the implementation of an increased minimum

⁴¹ Timothy W. McGuire, Sara Kiesler and Jane Siegel, "Group and Computer-Mediated Discussion Effects in Risk Decision Making," Journal of Personality and Social Psychology 52.5 (1987), Daan van Knippenberg, Barbara van Knippenberg and Eric van Dijk, "Who Takes the Lead in Risky Decision Making? Effects of Group Members' Risk Preferences and Prototypicality," Organizational Behavior and Human Decision Processes 83.2 (2000).

parcel size, such broad application of eminent domain may only be politically feasible in the aftermath of a natural disaster. The case for HOAs should be somewhat easier, however, in that the original property owner can be granted the right of first refusal in repurchase. The original owner will be made mostly whole, although their property will now be encumbered.

Another difficulty in converting an existing neighborhood into a HOA managed area is the pre-existing variation in property. A preplanned development has commonality by design, but division of rights and responsibilities in an existing neighborhood may be contentious and contractually expensive. Uniform regulations are relatively straightforward in application to the buildings of similar design and construction typically found in a HOA. The administrative burden of design and implementation of highly disparate regulations for various buildings may weaken the advantages of private HOA enforcement. As such, there will probably be substantial efforts to incorporate relatively similar pre-existing structures within close proximity for the establishment of a HOA. For reasons of equity, owners of older buildings would likely have to contribute higher dues and startup-fees until their property could be made relatively comparable to more modern structures.

For new developments, the primary concern is the details of the covenants. The details of the covenants vary greatly, but to the extent we want the HOA to help in the enforcement of public regulations in mitigating disaster risk, we should consider whether the government should be explicitly listed as a beneficiary. Benefits in gross can cause difficulty in causing covenants to run with the land. As such, states have often created conservation servitude statutes (often misleadingly entitled conservation “easements”)

allowing a beneficiary in gross. While the designation of the government as a beneficiary is not necessary, it may reduce the ability of neighborhood property owners from disbanding the covenants restricting their land usage. Subdivision covenants may allow alteration by a majority or greater vote; the Uniform Planned Community Act section 2-118 (1980) allows termination with 80% assent.

The covenants must also provide sufficient leverage for HOA administrators to compel action. As HOAs are a form of collective ownership, collective action problems may be a hindrance to regulatory compliance. Given sufficient size,⁴² however, a HOA can rely upon paid administrators to facilitate compliance with both internal and public restrictions. Such paid administrators tend to provide superior leadership and avoid the collective action problems associated with volunteer efforts.⁴³ These minimum size requirements are a limiting factor in establishing HOAs in existing neighborhoods.

A final concern with HOAs is the perception of support for the wealthy. Such planned communities traditionally have been viewed as bastions of the wealthy and suburban.⁴⁴ Nonetheless, St. Louis has experimented with private planning in an urban setting, creating neighborhood associations along specific, privatized streets.⁴⁵ These associations have managed to protect mixed race, middle-class lifestyles in the midst of surrounding crime and deterioration. As to the actual impact on the renting class and the poor, the actual impact of HOAs will likely depend on the specific CC&Rs of the HOA. Limitations on leases, occupants, income minimums, and mixed-use restrictions may have an adverse effect on non-property owners.

⁴² See Chen, *supra*.

⁴³ Oliver, *supra*.

⁴⁴ Nelson at 863.

⁴⁵ *Id.* at 867.

Conclusion

Inherent in the adoption of private property rights is the belief that individuals can make good decisions about their property, specifically their land. The use of disaster-prone land, however, can be costly to society as a whole, in loss of both life and property. Education and enforcement regarding appropriate land use through zoning and building codes is a key step in minimizing losses. Given limited public expenditures on enforcement, this paper raises two possible adjustments in the structure of land ownership to improve the community's preparation and mitigation against the risk of natural disasters.