Private Communities, Market Institutions, and Planning

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F. Frederic Deng Peter Gordon Harry W. Richardson

Introduction

In the last 25 years, more than 40 million Americans have moved into private communities, places governed by homeowners' associations and guided by detailed rules of governance that are more or less equivalent to the administration of neighborhood zoning. In addition to these CIDs (Common Interest Developments), there is a parallel rise of large shopping centers and industrial parks that also include the private delivery and maintenance of public goods and spaces. We are not the first to argue that the rise of private communities is a response to a policy failure rather than market failure (Nelson, 1977). The remedy includes private provision of many public goods in response to market signals, reflected in the capitalization of value in land prices (Foldvary 1994). Market institutions have apparently evolved in Hayekian fashion, demonstrating a decentralized response to the problem of managing communities and neighborhoods.

Some commentators have described private communities as "utopias," uniquely associated with the U.S. experience.[1] In 1970, CIDs were only about 1 percent of the U.S. housing stock. Now, the share is close to 15 percent. One out of every seven Americans is now governed by a community association. Since 1970, almost one of every three new residential units is part of a CID (Treese 1999). Outside America, there has also been a growth of this type of development.[2] The numbers alone suggest that private communities have attributes that deserve serious study.

In the context of North America, the CID phenomenon suggests several research questions. In this paper, we focus on two. First, given well-established systems of public zoning, why are private communities established? This question implies some failures of conventional zoning and raises the issue of the efficiency properties of CIDs. Second, because the growth of CIDs is closely associated with the process of suburbanization, can we explain their simultaneous development? Why is it that CIDs are much less likely to flourish in established neighborhoods?

Existing studies of CIDs are few. Dilger (1992) undertook an early study based on a survey of homeowner associations. His conclusions can be

[1] See, for example, McKenzie's (1994) book *Privatopia* or the title of the article in *The Economist,* "America's New Utopias" (2001).

summed up by a quote from a homeowner: "We have the greenest lawn in the country!" Other writers have also reported that CIDs' management works well (Ellickson 1998). On the other hand, McKenzie (1994) cited anecdotal evidence (largely from newspapers) that paint a much less favorable picture of CIDs. These anecdotes need to be juxtaposed with the popularity of these private communities as a residential choice. *The Economist*'s description of CIDs as "America's new utopias" was also accompanied by another label, as examples of "smart growth." However, this is somewhat confusing, because the latter term has a very different connotation in the urban planning profession.

Our analysis, focusing on an institutional perspective, starts from some basic principles of urban land use. Our building blocks are two facts of life. First, the consumption of land and local collective goods is bundled together. Second, landowners have limited *ex post* mobility because of the specificity of their investment. We also distinguish between two types of mobility, daily commuting and residential relocation (the latter is much more of a concern here).

Because of the nature of the political process, uncertainty in conventional zoning leads to a hold-up problem (as a result of the second

[2] Some national experiences are included in Barton & Silverman (1994). Another example is China,

spatial fact) in the quasi-contractual relationship between the landowner and the collective goods provider (based on the first spatial fact). This is the key tothe political hold-up problem. It then becomes efficient to integrate the landowner and local collective goods provider functions, as suggested by Williamson (1985) and Hart (1995).

The rise of private communities reflects the fact that conventional land use zoning can become a source of uncertainty for landowners or homeowners. In this sense, CIDs and their commercial equivalent, ground lease systems, are responses not only to a "market failure" but also to "political failure".

Given the complexity of suburbanization and exurbanization, we can approach our second research question in four ways: property rights and transportation technology, market competition as the seed for market institutions, market structure, and, finally, the inertia of cities as durable physical structures. The key issue is the relationship between urban spatial structure and institutions. This issue has not been explored very much in the literature. On the one hand, urban spatial structure has long been the focus of traditional urban studies. On the other hand, institutional studies seldom pay much attention to the interaction between markets and institutions, let

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where the central government agency requires all new urban developments to form homeowners

alone their spatial implications. In the literature on property rights theory, spatial analysis is also overlooked. Via the four approaches, we attempt to discuss the suburbanization process from the perspectives of institutions and property rights and explore the relationship between different institutional forms and the spatial structure of the modern metropolitan area. In this way, we can gain a better understanding of why certain forms of private communities grow in particular places.

Only by appreciating why and how market institutions respond can we expect to advance urban planning in ways that facilitate the development of urban society. Given the importance of the political hold-up problem in urban land use, it would be useful for planners to think about how to reduce uncertainty in land use controls while maintaining general planning goals. If we want to have a clearer understanding of the relationship between urban spatial structure and urban institutions, then the planning process must include institutional factors. In particular, there should be enough room left for market institutions to grow. This is the type of policy implications that we can derive from the phenomenon of private communities.

The next section elaborates the two key spatial facts and discusses the political hold-up problem in urban land use. Then we analyze why it is

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associations.

efficient to integrate landowner and collective goods provider functions, as illustrated in the rise of private communities. In the fourth section, we focus on the relationship between suburbanization and private communities in the context of metropolitan spatial structure. The fifth section discusses the policy implications of our analysis, especially its relevance to conventional urban planning. Finally, we offer some conclusions.

Urban Land Use: Two Spatial Facts

CIDs are typically new subdivisions such as condominiums and planned unit developments (PUDs) that include a special property rights structure carefully designed by real estate developers.[3] Common spaces and facilities are owned and managed by the homeowners association (or residential community association) set up by the developer. In this sense, residents in these developments enjoy "common interests" in public spaces. Furthermore, this "common interest" usually includes controls over each other's behavior if it is determined to adversely affect the community. Governing documents (CC&R) bind all owners to the community association and require mutual obligations. These associations "run with land" in the sense that all owners automatically become members of the association. The operation of the association and maintenance of common

spaces are funded by mandatory lien-based assessments. The key difference between CIDs and traditional single-family-home developments is about common spaces as well as regulations on residents' behavior. Conventional neighborhood zoning boards are supposed to function in exactly these areas. Hence, the brisk growth of CIDs points to some problems in conventional zoning, or more generally, the government-tax system in providing and managing local public goods.[4]

We concur with the view (Nelson 1977; Fischel 1985) that zoning (or land use controls) is a collective neighborhood property right. In other words, it is a collective good that is provided to the neighborhood and can be transacted in the market. It internalizes externalities among land uses. This is especially apparent in the commercial sector, e.g. shopping centers and malls. They seek an ideal tenant mix in order to maximize positive and minimize negative externalities among tenants.

Our two spatial facts underpin our arguments. The first spatial fact is that the consumption of land and local collective goods is almost always bundled together. Although collective goods have long been an important topic in many social science disciplines, especially economics, they are

[3] For the history of CID developments, see Stabile's *Community Associations: The Emergence and Acceptance of a Quiet Innovation in Housing* (2000).

traditionally distinguished sharply from private goods. Samuelson's (1954) treatment is a classical example that shows the impossibility of efficient provision of collective goods through a decentralized system. Many people have challenged this conventional wisdom (Tiebout 1956 and Buchanan 1965). However, the link between land and local collective goods often remained unclear. Foldvary (1994) advanced the discussion by introducing the concept of a "territorial collective good" with a defined spatial ambit. The idea is that land and local collective goods are consumed together. When an individual buys a parcel of land, s/he also potentially consumes a variety of local collective goods provided within the same local area, such as security, schools and street cleaning. In this broad sense, human societies have been organized territorially since the birth of civilization.

Although people consume land and collective goods together, these goods can be provided separately. A typical example is the traditional land use control system, in which fee simple ownership of land is transacted in the market while land use control and other public goods are provided through local government. Therefore, it is important to understand when

[4] To avoid confusion in terminology, we will use the concept of collective goods instead of public goods, except when it is associated with particular public institutions. For a good discussion of these two concepts, see Foldvary (1994).

and how the provision of land and collective goods might be bundled together.[5]

The second spatial fact is that landowners have only limited *ex post* mobility even though they may enjoy substantial *ex ante* choice. For our purposes, we distinguish two types of mobility. The first involves people's physical mobility, which largely depends on available transportation technology. This type of mobility is more important to people's daily commuting and other regular travel. It increases choice in workplace and residential location. As we will discuss later, this type of mobility also has important implications for urban property rights, especially in the context of metropolitan spatial structure.

The second type of mobility involves residential *re*location. People often make specific investments related to a particular piece of real property or spatial location. Therefore, the costs affecting this second type of mobility are critically related to land or property ownership. Common sense suggests that the transaction costs (narrowly defined) associated with owning land and/or physical structures are much higher than the costs of acquiring other goods and services. Real property ownership involves legal procedures, financing considerations, agency fees, insurance costs, and long

[5] Some writers resort to technical complementarity for an explanation of bundled provision (Klein 1987).

search times to acquire or dispose of it. The direct purchase cost (i.e. the price) is directly associated with the specific investments associated with land ownership. Investment in a parcel of land is essentially an investment in a location, defined by its relationship to other locations and facilities inside macro social and economic spaces. For example, people with young children like to buy homes near good schools. In this sense, their investment in land and/or a structure is specific to the school's quality. School quality is heavily capitalized in property values. Once school quality declines, parents not only need to worry about their children's education but also risk severe financial loss from declining property values. This is because an important determinant of land price is collective goods provision, and this is normally beyond the control of a single landowner. Hence, any investment in land is specific to collective goods provision. Other cost components include specific physical investments (such as in structures, furniture or equipment) and investment in human capital and social networks.

Given the high costs associated with residential relocation, it is easy to see that homeowners' mobility is limited after buying the property even though they may have considerable *ex ante* choice. If they move, especially

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However, technical complementarity is more a technical term than an economic term. In many cases, it is

when prompted by a decline in the provision of local collective goods, their investments specific to the local collective goods are going to suffer a loss. Limited *ex post* mobility is the key to the second spatial fact. But, will this induce people to make their voice heard in the local political process? In other words, between the choice of exit and voice, will people prefer voice to exit? It is possible that homeowners' *ex post* incentives to become involved in local politics may be stronger if their exit option is substantially reduced. DiPasquale and Glaeser (1999) found that homeowners are more likely to be involved in local politics than renters. However, from the perspective of *ex ante* efficiency, the motivation for local politics is quite low.[6] This is especially true given their limited *ex post* mobility. So, yes, homeowners may voice their concerns more loudly after they settle down in a particular location. On the other hand, before they choose where to live, they will try to find a location that minimizes the risks of local political conflicts.

Furthermore, a voice option that relies on the government provision of local collective goods is problematic. The concept of a benevolent and omnipotent government has been challenged by public choice scholars (Brennan & Buchanan 1980; Buchanan, Tollison, *et al*. 1980). Nevertheless,

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the market that performs the matching and aggregating of functions for complementary goods.

the Tiebout (1956) model has long been hailed as the model for the efficient government provision of local public services via inter-governmental competition. However, the Tiebout model is undermined without appropriate property rights or institutional arrangements. Property owners cannot vote with their feet without significant financial losses. Many theoretical and empirical studies (e.g. Yinger 1982) point to the same conclusion.

Private Communities

There exists a quasi-contractual relationship between the landowner and the provider of local collective goods. The *ex post* exit option does not always work because of the specificity of real property investments. What, then, explains the particular institutional forms of private communities?

Conventional zoning and urban planning are implemented by zoning boards, planning commissions, City councils and similar government agencies. All these activities involve a political process. Even though technocrats may play an important role in this process, the final decision-making remains political. As with most political institutions, equity remains a very important goal. Mechanisms exist to help the system accommodate as many voices as possible. The very features that may give political

[6] Olson (1965) elaborated on the limited incentives for people to get involved in collective action.

institutions strength at the same time create severe problems. Rent-seeking behavior by special interest groups combined with the rent-extracting behavior of government officials compromises efficiency, and results in uncertainty (Buchanan, Tollison, *et al.* 1980; McChesney, 1997). The only link between government performance and non-interest group constituents is the number of votes. However, voters are often not landowners (e.g. the 80 percent renter population in the politically active city of Santa Monica, California). Many zoning decisions negatively affect landowners. The political process adds considerable uncertainty to the efficient provision of collective goods.

Uncertainty in a contractual relationship that involves relationship-specific investment leads to the hold-up problem, which is a central issue in recent institutional economics discussions. Because of the costs of writing and negotiating contracts, the inability of courts and other third parties to verify *ex post* values of certain variables observed by all parties, as well as bounded rationality, contracts are unlikely to be comprehensive; thus, *ex post* renegotiation becomes crucial. Parties with investments in relationship-specific assets are afraid that they may be expropriated of the surplus created by relationship-specific investments, and tend to underinvest. This is the celebrated hold-up problem (Williamson 1985; Hart 1995). To overcome

this problem, a variety of property rights and institutional arrangements emerge. Theoretical and empirical studies suggest that the integration of relevant parties in the contract is an efficient response to resolve the hold-up problem (see, for example, Grossman and Hart 1986).

The problem of urban land use is essentially a political hold-up problem in the sense that uncertainty results from the political process not the market. Two typical examples of the political hold-up problem are NIMBY issues and regulatory takings, two well-known phenomena in American urban land use. The NIMBY issue is most visible because of homeowners staging vigorous political protests against proposed public or private facilities locating in their neighborhood. Homeowners fear that such developments may negatively affect their property values. Their actions hold up government in the provision of local collective goods. On the other hand, because landowners cannot easily move by selling their property without incurring significant losses in the face of negative zoning decisions, they are, in turn, held-up by the government. This is also the nature of regulatory takings examples. Both NIMBY and regulatory takings characterize the political hold-up problem embedded in the conventional

zoning process.[7] In this sense, urban planning adds to uncertainties in the land market.

The political hold-up problem prompts market institutions that integrate landowner and collective goods providers. Private communities are a good example of this type of response. Deng (2002) discusses the different characteristics of residential and retail real estate and how they lead to alternative institutional forms. In CIDs, homeowners associations are directly delegated by homeowners; they have mutual obligations towards each other. The free-rider problem in public goods provision disappears. The funding and provision of collective goods are now bundled together with land, similar to what Henry George (1879) advocated, exploiting the efficiency properties of Tiebout competition.

Market competition determines the success of CIDs. This is the key idea developed in Hayek's (1988) theory on market institutions. Developers of residential properties have found that not only is it in their interest to discover the optimal mix of structures and design elements of residential developments but also they have the opportunity to discover, articulate and deliver optimal rules of governance. In other words, it is market competition

[7] Deng and Gordon (2001) explore how private zoning mitigates both NIMBY and regulatory takings problems.

that drives developers to bundle the provision of collective goods and private goods efficiently and the rules by which they are managed.

Another reason for the growth of CIDs is rooted in Hayek's ideas about decentralized knowledge (Hayek 1945). In addition to public spaces and facilities, one important collective good provided by CIDs is regulations regarding residents' behavior and possible neighborhood externalities. This is not covered by conventional zoning boards. It is an impossible task for conventional zoning boards or urban planning agencies because neighborhood externalities are so decentralized. A possible externality among land users can change with any change in either nearby land uses or in any land user's behavior. Only market institutions based on decentralized knowledge can efficiently respond to these problems. The more conventional political processes are too costly.

In summary, given the nature of the political process, conventional zoning or urban planning in general may become a source of uncertainty in urban land use. They cannot respond efficiently to land use problems that are highly decentralized in nature. The growth of private communities reflects the evolution of market institutions responding to both market and political failure.

Exit and Private Communities

The use of the label "utopia" for private communities suggests their link to suburbanization. This raises a serious question about the relationship between metropolitan spatial structure and urban institutions.

Yet, theories of institutions or property rights are neutral in their treatment of urban spatial structure. In fact, conventional zoning in a government-tax system is implicitly or explicitly taken for granted.[8] The classical theory in urban economics is only about the trade-off between commuting costs and lot size (Alonso 1964). The large body of the formal theory of urban spatial structure has almost nothing to say about institutions or property rights. If institutions and property rights arrangements are not exogenous to urban spatial structure, then our understanding of many urban issues and the solutions to many urban problems can no longer be institutions-blind. This is why Gordon & Richardson (1999) call on regional scientists to pay more attention to the evolution of market institutions.

On the other hand, institutional studies in social science tend to oversimplify the role of markets, let alone any spatial analysis, in order to focus on the internal structure of institutions or property rights arrangements. In these studies, markets are an abstract and exogenous environment with zero interaction with institutions. For example, in Williamson's framework,

[8] For a classic discussion of property rights and zoning see Fischel (1985).

markets are an exogenous source of uncertainty that makes institutional arrangements necessary, but how institutions interact with market structure is ignored (Williamson 1985). Although this is acceptable for some purposes, it is inappropriate in discussions of urban institutions or urban property rights, where spatial relationships are the key.

Obviously, the two approaches are not integrated. By analyzing the reasons for the simultaneous development of private communities and suburbanization or exurbanization, we can better understand the relationships between urban spatial structure and urban institutions or property rights.

Why are most private communities located in the suburbs? Why are they rarely found in inner cities? We can approach this topic from four perspectives. The first is based on the relationship between property rights and transportation technology. The second focus is related to market competition and resource allocation. A third perspective looks at the interaction between market and institutions, especially in terms of *ex ante* efficiency. A fourth approach points to the inertia of cities in terms of physical durable assets and political power.

Property rights and transportation technology

In a broad sense, property rights are institutional arrangements that are applied to the use or consumption of a bundle of goods.[9] This results in some costs, especially agency costs like the political hold-up problem. Because the consumption of land and collective goods are bundled together, it is impossible to "divide" the physical good and apply different forms of property rights to the private good and the collective goods respectively. As a result, we may end up with special property rights arrangements such as conventional zoning, in which land is owned by private individuals while collective goods provision is determined by zoning.

But this is not inevitable. The bundled consumption of the two types of goods does not necessarily mean that the property rights arrangement must take a particular form. Auster (1977) regards the quality of a good, such as the color of a car, as a collective good. In this way, the bundling problem of private good and collective goods is introduced into quantity-quality space. People cannot own quantity and quality separately. But, as we all observe in our daily lives, different qualities of goods do not always present a problem that must be solved through special property rights arrangements. People can own/rent more than one physical good (with

[9] Its narrow definition, as usually applied, only refers to physical goods.

different qualities) and simultaneously and effectively avoid the costs or disadvantages from special property rights arrangement that split the ownership of the private good (as represented by quantity) and the collective good (like quality). For example, if you want a dark suit for a formal event and an Aloha shirt for a trip to Hawaii, you can simply buy both. You do not need to appeal to a board in order to change the color or design of your shirt. Hence, there is generally no fixed constraint from a particular form of property rights as long as one can own/rent more than one good simultaneously.

Yet, in terms of land and territorial collective goods, life may not be so simple. On the one hand, human society is organized spatially according to various types and levels of political, economic, social and cultural territories. Sometimes, it is difficult for people to live on both sides of boundaries simultaneously, even if they had the capacity to do so. This is especially true with respect to international borders. There is an important obstacle to the simultaneous ownership or use rights of territorial goods: the costs of moving.[10] People have to move in order to consume collective goods that are bundled with a parcel of land. This even applies at the lowest level of mobility, i.e. commuting. Property rights arrangements cannot be

neutral as long as there are significant transportation costs. More advanced transportation technology and increased mobility will reduce the importance of special property rights or institutional arrangements. This is similar to the exit option in Hirschman's theory (1970). People can live in suburbs, enjoying open space and environmental quality while working in the CBD or the core city. The enjoyment of both two types of territorial collective goods does not require special institutional arrangements as long as people are mobile (in the United States, usually driving). It is difficult to imagine what complicated (social, political and economic) institutions would be needed to achieve the same goal if efficient surface transportation technology did not exist.

In economic terms, people's preference for sole ownership is because of the agency costs associated with split ownership. More generally, this reflects people's desire for autonomy and freedom, their wish to break away from the fixed constraints of a particular form of property rights or institutional arrangement. This is in the same spirit as people's preference for transportation autonomy (Gordon and Richardson 2001). In this sense, "property rights autonomy" and transportation autonomy go hand in hand.

[10] There are generally two dimensions to the obstacles to simultaneous ownership and consumption. They are time and space. For non-spatial private goods, time costs may be more important.

As a result, from the property rights perspective, transportation technology and the feasibility of exit from the core city determine that traditional core city urban institutions that split the ownership of land and local collective goods may be unnecessary in the suburbs. New institutions may arise out of the freedom to contract and the freedom to choose. This lays the foundation for CIDs, which are a combination of the sole ownership of real property and a property-based governance structure of collective goods provision.

Market competition in bundled goods

The growth of private communities is the evolutionary result of a market for local governance structure. Private communities, in various forms, compete in the search for new urban institutions. The prevalence of CIDs in residential real estate is indicative of its current efficiency properties relative to other institutional forms in this competition. This institutional form is not designed by any planner or economist. It is market competition that prompts real estate developers to bundle the governance structure with physical development. Profit-maximizing behavior in market competition is the "invisible hand" behind the growth of CIDs.

It should be obvious that market competition is the key efficiency property of CIDs, whether from a Hayekian evolutionary perspective or

from pure institutional analysis. Nevertheless, competition is not merely among different parcels of land or real properties. Nor is it just among providers of local collective goods, as in the most elementary forms of the Tiebout model. It is competition in the bundled provision of land and local collective goods. What are the implications of this for the location of CIDs?

The traditional monocentric model of cities focuses largely on bid-rent competition and accessibility (Alonso 1964). This treats land as only a private good. On the other hand, the traditional model of local public services (i.e. the Tiebout model, 1956), says nothing about spatial structure. Given that the consumption of land and local collective goods that can be bundled together, what happens if we combine these two models? Certainly, the competition is not only among collective goods provision but also among locations. The complication is is that they can be combined. If both types of goods could be easily measured, it should not matter how they are bundled together; the competition between the provisions of any one good inside the bundle can be as less imperfect as without bundling. This is the basic assumption behind the traditional hedonic pricing approach. But there is a serious measurement problem, especially with respect to local collective goods.

Barzel (1982) advanced the concept of "measurement cost." No good for sale is free from the cost of measuring its attributes. The buyer's cost of measuring the good, his demand, the good's price, and the seller's sorting practices are all interdependent. Excess measurement may result in economic dissipation. Various market arrangements emerge to minimize this type of extra costs from the measurement problem. In the case of urban land use, the problem of measurement cost also exists. For example, it is difficult for a stranger to know the true neighborhood condition or whether the apartment manager is a nice person. The best way, of course, is to live there for a period of time. But to allow tenants to leave whenever they want imposes heavy economic burdens on the landlord. Hence, many apartment buildings ask tenants to sign a yearly lease; a month-by-month rental demands a higher rent.

When two goods are bundled together, no matter whether bundled in provision or consumption, it should not affect market competition in each good if there was no measurement problem and if the providers had no monopolistic power. Traditionally, the literature in industrial organization focuses on the role of bundling when associated with monopoly, especially leverage theory and price discrimination theory (Whinston 1990; Stigler 1968; Schmalensee 1984). Few studies analyze the bundling issue from the

angle of measurement cost. If there is no measurement cost, the consumer can easily figure out the total value of the bundle and the values of each good in the bundle, assuming perfect competition in each good. Even if the primary good is in a monopolistic market and the bundled good is in a competitive market, bundling cannot effectively become a tool of leverage for the monopolist.[11] This is basically Posner's criticism against leverage theory (1976). With the measurement cost problem, competition is also "bundled" and the consumer may not be able to separate out "mentally" the goods inside the bundle. In the example of oranges used by Barzel (1982), one way for the seller of minimizing the measurement cost is to package all oranges (good and bad, sweet or sour, dried out or luscious) inside a bag so that the buyer cannot pick and choose. Because it is difficult to measure the quality of the oranges, the problem prevents competition among different tastes.[12] Therefore, measurement cost and/or monopoly may distort market competition in any good that is bundled with others. In other words, with measurement cost a reality, any competition is not only price competition among goods but also among market arrangements that minimize their measurement costs.

[11] Whinston (1990) points out that leverage theory still holds if the monopolist can make pre-commitments for bundling, resulting in strategic foreclosure in the tied goods market.

[12] Of course, this example is based on many assumptions. For instance, we assume there is no time dimension here and, hence, consumers cannot rely on their *ex post* experience.

When we examine competition in providing local collective goods, the measurement problem makes perfect competition impossible because its consumption is bundled with land. Especially when the private good (land) has some monopolistic advantages, this problem may get worse. From the perspective of a monocentric city, the city center enjoys monopolistic advantages because of its unique location. The further away from the center, the more the choice of similar (or approximately equal) locations expands, and the less severe the monopoly problem becomes. Hence, suburbs have two major advantages in terms of market competition in the provision of local collective goods. First, the land monopoly problem from land dissipates. Second, with many similar locations on an annular ring at the same radial distance, competition in bundled goods is largely competition in local collective goods. Although any type of property rights or institutional arrangement could be arranged in the center of a monocentric city and even become successful, they could not reflect competition in local governance structure.[13] In this sense, a necessary but insufficient condition for competition in local governance structures in a metropolitan region is distance from the city center.

[13] City centers may nevertheless play an important role in inter-urban competition.

When a polycentric or even dispersed metropolitan structure replaces the monocentric form (Gordon and Richardson 1996), competition in local governance structure approximates a Tiebout world. The transformation of the traditional monocentric city to a polycentric metropolitan area also helps to create the environment that breeds private communities.

Institutions and market structure

As we discussed earlier, private communities are an institutional response to the political hold-up problem. In this way, *ex ante* efficiency can be enhanced by integrating landownership and collective goods provision. However, if we wish to explore the spatial implications of the hold-up problem, we find a deficiency in conventional institutional analysis: space is a missing. In both Williamson's (1985) framework of transaction cost economics and in Grossman, Hart and Moore's (GHM) (Grossman and Hart 1986; Hart and Moore John 1988) New Property Rights discussions, the market remains simple and exogenous. Spatial market structures are excluded.

From the perspective of *ex ante* efficiency, there are two important elements directly related to market structure that are often simplified via exogenous assumptions. These are: uncertainty in the market and the outside options of contract parties.

Uncertainty is the source of all issues related to the hold-up problem. In the absence of uncertainty, incomplete contracts disappear and no institutions are necessary. However, in most institutional studies, uncertainty is rarely, if ever, made endogenous. But uncertainty is closely related to market structure. In the case of a perpetual monopoly, there is no uncertainty. The conventional analysis on institutions and property rights (e.g.Williamson, GHM) assumes perfect competition in the market.

In urban land use, uncertainty in providing local collective goods is directly related to urban spatial structure for two reasons. First, as discussed discussed, there is a degree of monopoly in the CBD of a monocentric city. This monopolistic advantage gradually declines with distance from the center because the number of similar locations increases on each symmetric perimeter. Hence, *ceteris paribus*, uncertainty for the landowner in *ex post* contract executions increases whenever a location is away from the center. This is true at least for the local collective goods provider. The closer to the city center, the more difficult it is for the collective goods provider to lock in a landowner.

Second, an important collective good in urban land use is the control of neighborhood externalities. This is probably the most decentralized and volatile element in land use. It can change with new next door neighbors or

changes in the behavior of existing neighbors. This uncertainty in neighborhood externalities is also related to density. *Ceteris paribus*, more densely populated areas create more externalities among neighbors and land uses. Uncertainty for the collective goods provider is positively related to urban densities that tend to decline with distance from the city center, especially in a monocentric world. This second line of reasoning shows that it is more difficult for landowner to lock in (or hold up) the collective goods provider when distance from the center increases, because of increased competition.

These two reasons, from opposite directions, reinforce a single conclusion. That is, although uncertainties to the landowner and the collective goods provider are not symmetric along any radius, they are complementary. When uncertainty to the landowner increases in the suburbs, it is potentially reduced for the collective goods provider. Vice versa, while uncertainty for the collective goods provider is higher in the center, it is lower there for the landowner. Hence, the further away from the city center, the more likely it is that an institutional response will emphasize the hold-up problem by the collective goods provider against the landowner.

The second element in the hold-up problem related to market structure is the outside option. The outside option is what a party to the contract can

receive if he discontinues the contract and switches to others in the market. It is usually treated as an exogenous variable. Nicita (1999) suggests that, if the assumption of perfect competition is dropped, the outside option can be made endogenous, resulting in interactions not only between the two parties to a contract but also including the two best competitors for each of them outside the contract. This approach combines market competition outside a contractual relationship and the hold-up problem inside a contract. In order to avoid an *ex post* contract enforcement problem, the two parties to the contract may be tempted to underinvest. They can also enhance contract enforcement by reducing their counterpart's *ex post* exit options, if we assume that contract implementation is a learning process. In the latter case, in order to deter potential competitors in their respective markets, they may be induced to overinvest so that they become specific to the contract. In a nutshell, in this complex interaction both inside and outside the contract, each party will try to reduce its vulnerability (because of specific investments) to the other party inside the contract while strengthening its own contractual power by reducing the other party's outside option and the market entry options of potential competitors.

In urban land use, there are at least two factors that relate spatial structure to outside options in incomplete contracts. The first is the

monopolistic advantage of a monocentric CBD (or central city). Landowners at the center have a high outside option that collective goods providers do not. In other words, it is more difficult for a collective goods provider to find another landowner in the city center than for a landowner to find another collective goods provider. Thus, it is relatively difficult for collective goods providers to lock-in landowners while the reverse is much easier. This relative contractual power of the landowner gradually dissipates with increasing distance from the city center.

The second factor is based on the asymmetric relationship between the landowner and the collective goods provider. The definition of collective goods implies that one collective goods provider is involved with multiple landowners or land uses. The collective goods providers have an advantage in any bargaining or enforcement of contracts; a single landowner has little power in this process. This is a typical problem that has been widely discussed (e.g. Hirschman 1970; Olson 1965).

What do this tell us? The spatial implication is that CIDs are more likely to be located in the suburbs while leasehold communities are more likely to be located close to city centers. The integration of landowner and collective goods providers initiated by the landowner is easier when the location is in the city center. However, in any model with multiple

landowners it is difficult to lock-in a collective goods provider. The conclusion is that the ground lease system, in which an outside landowner also becomes the provider of local collective goods, can be more easily established when close to city centers. On the other hand, a collective goods provider can easily lock in landowners in the suburbs. Hence, integration will be in the form of one collective goods provider vis-à-vis multiple landowners. CIDs are key examples of this type of institution.

Our analysis of the relationship between uncertainty and spatial structure also strengthens the above conclusion, in other words, why CIDs are more visible in suburbs than in central cities.

Although our arguments focused on the monocentric city, it is a simple extension to apply them to the polycentric city. In the latter case, both the CID type of institution and even ground lease systems are also less constrained by location.

The inertia of cities

Cities, as physical constructs, are durable and have their own inertia. The bundled consumption of real property (land and improvements) and local collective goods determines that the growth of new market institutions has to cope with these facts. Many studies (Wheaton 1983) have analyzed the dynamics of spatial structure based on durable assets. The key argument

is that buildings cannot be immediately torn down and have to be gradually replaced, depending on physical depreciation and developer foresight. From our point of view, the question is: Can new market institutions develop in old or existing physical structures? To simplify this issue, let us assume that the physical facilities for local collective goods are already present.

Nelson proposes the privatization of existing neighborhoods into private communities by majority voting (Nelson 1999). Given the limited *ex post* mobility of homeowners, this *ex post* privatization may limit their options by closing a time window. Although this is feasible, it is not very efficient in the sense that the minority of residents who vote against the new community organization may suffer. Without "enforced" privatization, it will certainly be much more difficult for homeowners to reach consensus to form a new CID-type community. This shows the difficulty for new CID-type communities to grow from existing physical structures.

The problem facing new CID-type communities is less evident for ground lease based communities. An outside owner with land and improvements does not need to worry about the consensus of the residents, who are relatively mobile without the burden of specific investments. However, there might be a practical problem. It may not be easy to assemble parcels of land if they are not already owned by a single owner.

Nevertheless, this may not always be a daunting task, especially when the physical, social and economic depreciation of the property has reached an advanced age.

It appears that new market institutions, especially CID-type communities, cannot easily grow in existing urban areas. Hence, there are two ways for market institutions to grow. First, CIDs and ground lease systems can develop simultaneously with the suburbanization process. Second, they may replace obsolete land use patterns when urban renewal takes place. Based on what we have observed to date, most CIDs will develop in suburban areas.

We have discussed the relationship between private communities and metropolitan spatial structure from four perspectives (property rights, market competition, institutions and market structure, and the inertia of cities as physical durable assets). All suggest that the rise of private communities is intertwined with the suburbanization or exurbanization process.

Given the current debate on urban sprawl, some suggest that private communities might exacerbate some of these problems. Not necessarily. The "(l)ocation [of CIDs is] usually in more densely settled areas closer to community amenities, jobs, and other urban services; new detached housing is further removed from urban centers" (Dowden 1980)). Why? Simply

because people do not to need to move further away given the new market institutions that secures the provision of collective goods they want. This may not be utopia, but perhaps a compromised rationality. Exit trumps voice, but it sometimes generates voices.

Policy Implications

The growth of private communities demonstrates a market response to the political hold-up problem in conventional zoning and land use control. Market institutions evolve to fix not only "market failure" but also "political failure". Given the varied scales and types of collective goods, political institutions are always necessary, but they have to be compatible with the market economy. By revealing the hold-up problem in urban land use, our analysis points to new ways of improving urban planning.

Urban planning can be market-oriented. In addition to embracing well known approaches (such as transferable development rights), urban planning consider much more. First, urban planning can reduce the uncertainty of political decision making. Contracts about land use and development is one option. It guarantees the future of land use patterns over a certain period of time. Despite the objections that this involves stripping away future political rights, households in the future are mobile and have the

right to choose where to live. Those who are primarily affected are those who invest in a place now.

Second, private communities also illustrate why urban planning is neither omnipresent nor omnipotent. Planning should leave decentralized problems to market institutions. Conventional urban planning needs to recognize its limits.

NIMBY and regulatory takings are two persistent phenomena in American urban land use issues. Both are manifestations of the political hold-up problem. Deng and Gordon (2001) discuss the policy implications of private communities in terms of NIMBY and regulatory takings. The standard proposal for regional government to solve the NIMBY problem is misleading. It does not touch on the central problem behind the NIMBY phenomenon. Contrary to its intention, it may further exacerbate the political hold-up problem by inserting more bureaucratic layers and moving decision –making decisions further away from homeowners. To mitigate the NIMBY problem and regulatory takings issues, it is very important to reduce uncertainty in land use control. Planners cannot achieve this goal by themselves. There have to be new institutional designs and new arrangements.

Our analysis of the relationship between private communities and metropolitan spatial structure may also shed light on some important policy issues. First, with the development of transportation technology, the desire for property rights autonomy increases. Households want to own not only land and improvements but also the local collective goods tied to the property. This trend in urban institutions will not go away as a result of novel architectural designs or physical planning. Given what we have discussed, the exit strategy cannot easily be reversed.

Second, urban sprawl is usually associated with social costs. Our analysis suggests that private communities, such as CIDs, may actually mitigate some of those costs. For example, given the relative certainty in land use and neighborhood externalities within private communities, households will be less likely move (e.g. further out). It is also probable that densities within private communities are higher than standard detached single-family housing. These mitigation effects reflect the market tendency towards efficiency.

Third, central city and downtown renewal has been a challenge facing American cities. Many attempts have largely failed. Our analysis suggests that institutional or property rights arrangements should be taken into account when we consider how to revitalize central cities or downtowns.

Privatizing existing neighborhoods, as Nelson (1999) proposes, may not be an efficient choice. An institutional form that involves a single outside owner, such as in the ground lease system, may be a better option.

Fourth, most of our theoretical arguments are based on the monocentric city model. But they can be easily applied to polycentric metropolitan areas; a Tiebout world. In this case, our analysis is easily applied to the relationship among multiple centers, suburban and exurban areas.

Qualifications

When households buy into a CID they purchase a package, not all of which is benign. They may obtain security, protection of property values, and a desirable mix of collective goods (e.g. party room, exercise facilities, swimming pool, etc.) not easily obtainable outside. On the other hand, they have to tolerate some restrictions on individual liberty[14]. Possible examples include no RV parking, no choice of trim paint, restrictions on front yard landscaping, strict guidelines for window treatments, no display of American flags ("a lawn ornament"!), etc. The restrictions vary, but in all cases there will be some. The argument that households willingly made these choices is

[14] Blakely and Snyder (1999) have raised another objection to an important type of CID, i.e. gated communities. Their argument is based on the idea that gated communities reflect social inequities and elitism. While recognizing that the very poor will not be members of CIDs, we reject this interpretation

undermined to some degree by the fact that the CC&Rs are so long and complicated that few read them prior to purchase. Furthermore, they are very difficult to change once in place, primarily because of voter apathy. If a person objects strongly to any particular restriction(s), the most direct method to deal with the problem is to obtain a Homeowners' Association Board that does not enforce the CC&Rs. This implies organizing a slate of candidates and running oneself, an investment of effort and time that may be inconsistent with the rational voter model, i.e. the costs of participation are so high that you have to be almost obsessively driven by the goal(s) that you want to achieve. However, it must be recognized that many have accepted the tradeoffs as a price worth paying. If not, property values in CIDs would be lower not higher, and turnover rates would be much higher.

Conclusions

Private communities, mainly in the form of CIDs and ground lease systems, are urban institutions that emerge as the result of market competition. Their common feature is that the provision of local collective goods is bundled with land and improvements. This quiet evolution was not designed by politicians or even scholars; market competition is the driving force behind this evolution in urban society.

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because many moderate income households participate in CIDs and the concept is too popular to be

Why bundle the provision of local collective goods and land? First, private communities are an efficient institutional response to the political hold-up problem in urban land use. The consumption of land and local collective goods are bundled together. Second, landowners have only limited *ex post* mobility (of residential relocation) even though they may enjoy substantial *ex ante* choice. This is because of their specific investments in land and property. This combination of embedded uncertainty in the political process results in the hold-up problem. Urban planning becomes a source of uncertainty, despite its aim of correcting "market failure". An efficient solution to the hold-up problem is to integrate the roles of the landowner and the local collective goods provider (Williamson 1985). Private communities are an exemplar of the type of market institutions that respond to political failure.

In private communities, we observe a combination of exit and voice *a la* Hirschman (1970). This suggests the importance of the relationship between metropolitan spatial structure and private communities. There are at least four perspectives that can provide insight into the intertwined development of private communities and suburbanization and/or exurbanization. The first perspective is the relationship between property

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considered a preogative of high-income households.

rights arrangements and transportation technology (for daily commuting). With declining transportation cost, it is easier for people to avoid complex property rights arrangement by simply owning/renting different bundles of land and collective goods at the same time. This is the exit option from the property rights perspective.

Second, because suburbs provide the possibility of multiple competitors, it is the seed for market institutions. In contrast, city centers enjoy monopolistic advantages that make them much less likely as productive settings for new market institutions.

The third perspective is market structure. This helps us to establish the relationship between urban spatial structure and urban institutions. Conventional institutional studies pay little attention to the interaction between markets and institutions, let alone there spatial implications. There are at least two elements that associate urban spatial structure to institutional forms. The first is uncertainty in urban land use. The key factor of uncertainty in urban land use is externalities among different land users/uses. It is also the explanation of uncertainty in the political process. Because externalities in land use are positively related to urban density, *ceteris paribus*, uncertainty generally declines with distance to city center. The second element is outside options to contract parties. Because of the

monopolistic advantages enjoyed by city centers and the asymmetric relationship between landowners and collective goods providers, endogenous outside options determine that ground lease systems, owned and managed by an outside owner, are more likely to be located at or close to the city center. On the other hand, CID-type communities are more likely to be located in the suburbs.

Finally, any city is a collection of durable physical structures. In existing urban areas, CID-type private communities face the difficulty of *ex post* consensus. For a ground lease system with a single landowner, this is less of a problem even though it is still difficult to assemble land.

In light of all these discussions, we argue that urban planning should be market oriented, especially in order to reduce uncertainties in urban land use. Given that NIMBY and regulatory takings are both manifestations of the political hold-up problem, the remedy lies in integrating landowners' interests with the provision of local collective goods. Our arguments on the relationship between urban spatial structure and institutions suggest that private communities may actually mitigate some costs of urban sprawl. They are new options for voice, built initially on the exit option. The spatial implications of different types of market institutions also suggest that institutional arrangements could be an indispensable part of urban renewal.

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