An International Perspective on the U.S. Zoning System

Paul Cheshire London School of Economics

Abstract

Zoning (or planning) has important functions. Markets play a fundamental role in efficiently allocating urban land (Bertaud, 2018), but there are endemic problems of market failure. There are also conflicts of interest in land use—between owners of undeveloped and developed land and between local interests and the wider society. If 'rule-based,' planning can also reduce uncertainty and development risks. In planning systems, the level to which decisions are rule-based, discretionary, or reflect local or wider societal interests varies globally. Internationally, the U.S. system is among the most locally controlled but significantly rule-based because of the use of zoning. In contrast, in the United Kingdom and a range of other countries, local politicians largely decide on development on a case-by-case basis. More local control and discretionary decisions increase the power of the "not in my backyard," or NIMBY, interest because development costs are highly localized, but benefits range over a wide area, even a whole country. This process tends to end with generally restricted development, resulting in higher housing and land costs. This problem is increasingly visible on both U.S. coasts. Local control also enables zoning systems to protect the interests of insiders and exclude those below the poverty line, for example, by applying extravagant minimum lot sizes or zoning for single-family housing. More recently, attempts have been made to use planning to reduce carbon emissions or force mixed communities. The evidence suggests that zoning is unsuited for achieving either objective.

Why Plan?

What is zoning or planning for? Why do nearly all developed countries have planning systems, and why almost incidentally do people tend to think about national planning systems in such an insular way? Even informed U.S. observers might assume that planning is zoning when zoning is just the U.S. variant. In the United Kingdom, most people, particularly those who work with the system daily, might assume that the idiosyncratic planning system in place in Britain is "planning" and that piecemeal local political control of development is the democratic norm, embodying the British heritage of common law.

In considering the U.S. zoning system from an international perspective, it is important to put it into the context not only of its characteristics compared to the planning systems of other countries but also into the context of the underlying rationale for having planning systems. What problems do land use planning systems aim to resolve? What societal good do they aim to generate? How well does the U.S. zoning system address these issues compared with other planning systems?

From the perspective of an urban economist, land use planning addresses the problems of market failure endemic to land and real estate markets. These failures fall into three main categories of market failure identified by economists.

- 1. Patterns of land use deliver important categories of public goods, such as parks and open spaces, preservation of heritage architecture or historic districts, provision of space for urban infrastructure and utilities, and control of the urban built environment to maximize air quality.
- 2. Endemic problems of externalities—costs and benefits not reflected in prices—associated with patterns of land use exist, because the value the occupation of any parcel of land generates, particularly in urban environments, is partly dependent on the uses and activities associated with all other relevant parcels (whether airports 30 miles away or adjoining parcels).
- 3. Costs can stem from a monopoly, such as those arising in land assembly.

There is also a political economy aspect to the functions of planning systems. There are conflicts of interest between owners of developed land and owners of undeveloped land (Hilber and Robert-Nicoud, 2013). There are also conflicts of interest between the local or individual landowners and the interests of the wider society. There are costs of development, and these are very local, for example, costs such as noise and disruption during construction, loss of local amenities or crowding, and lower service standards from local public infrastructure and services. Development benefits can include lower property prices and better paying job opportunities in more productive cities. These benefits are typically spread thinly over a wide area—or in the case of productivity gains Hseih and Moretti (2019) and Puga and Duranton (2019) identified, the whole country. Additional coordination issues between development and infrastructure at a regional or national scale can form a separate class of market failure problems.

Planners might see zoning functions differently, although there would be areas of agreement with the perspective of economists, albeit formulated differently. Planners might stress environmental effects (although they fall into the category of market failure), place building, and equity. Place building is interesting and largely unaddressed by economists—even urban economists. Like the skill of an architect in designing a building that suits a site and maximizes the benefits of a building, it is a skill in designing how large numbers of buildings fit with infrastructure, topography, landscape, and other physical characteristics of an area and how the assembly of buildings, in interaction with their context, enhances the social welfare derived from living and working in them—how to design buildings that create a community. This skill of place building can be conceptualized economically as creating a private good, like high-quality architecture. A well-planned community commands a premium price compared with an ill-designed one or a shantytown thrown together by uncoordinated and unregulated individual actions. Good building

and community design, however, also have aspects of public goods; they create welfare for people who do not pay for them. Less easy to interpret from an economist's perspective, many planners have increasingly seen improving environmental and equity outcomes as part of their job.

Dimensions of Differentiation

The intention is not to go into detail about planning systems but to analyze their broad characteristics and evaluate the extent to which they fit the previously identified purposes. OECD (2017a, b) provides a useful overview of international systems. Planning relates closely to legal systems as a human activity, because it has a legal basis in all advanced countries. The legal aspect of planning can be more or less important, depending on the origins and national perceptions of planning systems and how they work. The U.S. system leans heavily on law rather than, for example, on design or engineering traditions. It is noteworthy that its foundational document, the Standard State Zoning Enabling Act (SZEA), spends substantially more space on the constitutional aspects of the Zoning Commissions and their Boards of Adjustment than it does on why they are needed or how they formulate and implement policies or draw up plans.

Turning to actual planning systems, these systems differentiate along two dimensions. The extent to which decisions about development are either:

- 1. Rule-based or discretionary.
- 2. Locally or nationally formulated and controlled.

National planning systems are not necessarily one or the other but tend to distribute along these dimensions. The U.S. zoning system is toward the rule-based end of the spectrum, but zoning ordinance waivers can exist, and re-zonings increasingly occur.¹ The U.K. system—exported to many former colonies—is highly discretionary, although local plans and national policies are supposed to guide decisions.

The planning system common to Continental Europe, the Master Planning system, is more clearly rule-based, prescriptive, and detailed than the U.S. zoning system. Uses for every parcel are planned, and permission to develop is virtually automatic if the plan and any other relevant regulations are followed. In countries such as Germany, France, or the Netherlands, plan formulation and decision control has an important element, which is national, or at least regional. The U.S. and U.K. systems are at the local end of the spectrum—the U.S. system by design and legal foundation and the U.K. system because an elected committee of the lowest tier of government, the Local Authority Planning Committee (LAPC), is the primary decisionmaking body. A national policy framework and often local plans exist, but the reality is that enforcement is weak to absent, so any local decision not flagrantly in breach of national policies is likely to stick.

¹ As explained in the following sections, zoning rule variations have a good economic reason to have grown over time. The effective restrictiveness of U.S. zoning on the supply of different types of real estate has increased over time, especially on the East and West Coasts. This restriction has created growing price discontinuities between uses or development density, increasing incentives in such locations for zoning changes.

Influencing Uncertainty in Development: Rules Work

One particular public good an efficient planning system can produce is a well-designed and administered system that increases certainty in an inherently risky and uncertain activity—development. The advantages are obvious in a rule-based system. Development is necessarily a risky business. It involves a major outlay of resources during an extended period of planning, design, and construction for an uncertain flow of future revenues from the sales of finished buildings at prices not yet known. Real estate markets are subject to cycles, and future prices are not easy to predict. Thus, development must yield quite a high rate of expected return to compensate for the risks.

A rule-governed planning system reduces risks, making housing supply more elastic and lowering prices in the long run (Shepherd, 1988; Shepherd and Mayo, 2001). Not only is it clear what is and is not permitted on the developer's site, but surrounding site uses are also determined. A discretionary system, such as in Britain, has the opposite effect. A risky business is made riskier because all permits are discretionary and determined by a locally elected political committee, which can be subject to lobbying and gaming. Developers cannot know in advance whether their proposals will be permitted. Although decisions of LAPCs are—according to national guidance—supposed to follow local plans, a recent report showed that only approximately 45 percent of LAPCs had a valid local plan (HOL, 2022). Not only that, when there is a plan, it is not necessarily followed; it is only advisory. The result is that the development risks and costs are increased significantly. The expected rate of return for any given project to be viable has to be higher to compensate for the extra risk of refusal. The mean refusal rate for development proposals of 10 or more houses in England was 25.4 percent during the period 1979 through 2008 but varied across LAPCs from 0 to 50.9 percent (Hilber and Vermeulen, 2016).

Since 1991, additional decisions about planning conditions requiring any development to include affordable housing—so-called Section 106 Agreements—have amplified uncertainty (Cheshire, 2018). These agreements are a peculiar British form of what is usually termed inclusionary zoning. The terms of these agreements cannot be predicted in advance, because they are negotiated on a project-by-project basis and not rule-determined. This not only increases developer risk but slows development; developers game the system by gambling on being able to come back and renegotiate reductions in the proportion of affordable housing that they must include as building progresses.

Although designed to produce affordable housing, in fact, this discretionary way of doing it makes housing less affordable overall. Adding uncertainty to inherently uncertain investment decisions—already made more uncertain by discretionary decisionmaking—increases the risks further. Higher risk translates into higher necessary profit margins, all else equal, to justify the investment, thus rendering a swathe of potential projects unviable. Another cost of a discretionary system is that when zoning regulations impose an economic restriction on supply, it incentivizes rent-seeking, not necessarily corruption in an obvious sense but actions imposing deadweight economic losses.

A study published in 2008 demonstrates that location and height-limit planning constraints restricted the supply of office space in London, increasing its costs by an amount equal to an 800-percent tax on construction costs in the extreme case of the West End (Cheshire and Hilber,

2008). Any developer who could successfully game the system to get more office space on a given site could earn a hefty rent.

All else equal, larger, more prosperous cities have more tall buildings, because land is more expensive, and taller buildings boost productivity (Koster, van Ommeren, and Rietveld, 2014). Similar space restrictions due to coastline, steep land, or growth boundaries make land more expensive, so buildings tend to be taller.

A look at actual cities shows major deviations from these theoretical expectations. Lake Michigan may constrain Chicago on one side, but a rigid growth boundary and height restrictions have constrained London wholly since at least 1955. Per head of population, however, there were nearly seven times as many skyscrapers—buildings more than 100 meters—in Chicago than in London. Even Paris has significantly more skyscrapers per capita than London. The only tall-building league London tops is the proportion of its skyscrapers designed by Trophy Architects (TA), architects who have won one of the internationally recognized lifetime achievement awards in architecture. Of London's skyscrapers, 25 percent were TA-designed compared with 3 percent in Chicago and zero in flexibly regulated and rule-based Brussels.

Careful analysis demonstrates that although Chicago may have been the birthplace of great modern architecture, any competent architect can get permission to build a skyscraper there if it meets the zoning regulations and building standards (Cheshire and Dericks, 2020). With London's discretionary planning, employing a TA seems to help developers generate a powerful signal of design quality, providing a passport to political approval and a bigger building.

In London, TA-designed buildings are 17 stories taller than non-TA-designed buildings, increasing a representative site value by 144 percent. Also, buildings designed by an architect after winning a lifetime achievement award increased between 13 to 17 floors (depending on model specification) compared with those the same architect had designed before receiving the award. In Chicago, an architect gaining TA status did not affect the height of their buildings.

This analysis might not seem to be important, but it represents a serious, albeit difficult to observe, deadweight economic cost—estimated as £59 million (\$75 million) for a representative site in the City of London—an extra cost symptomatic of an unpredictable planning system that injects opportunities for gaming the system (rent-seeking) and additional risk into the development process.

Adding Delay to Uncertainty

Another feature of the British system that further increases its cost is its elaborate quasi-legal system of appeals against LAPC decisions. At the very first stage, this process is within the local structure. If an application to develop is rejected, developers can—and often do—take advice, lobby, or consult and try again with an amended application. A more formal system is widely used, especially for larger or more ambitious schemes. If the LAPC rejects the proposal, the developer can appeal to the national institution: the Planning Inspectorate. Such appeals can take many months and cost tens of millions of pounds with consultants, expert witnesses, and lawyers. If the initial appeal to the Planning Inspectorate is not successful, then there is a further stage—the developer

can appeal to the government minister in charge of local government and development. Again, this appeal process can take several years, entail additional direct costs, and extend the period of uncertainty. Overall, some 450,000 development applications are received a year, many of which are very minor, and these generate some 17,500 formal appeals, of which approximately one-third are granted. Appeals are biased toward larger and more ambitious potential developments. Because of the highly localized nature of the U.S. planning system, I am unaware of any comparable information for the United States as a whole. The United Kingdom's Planning Inspectorate is a national system for England, and data are available on its operation.

Balancing Local and Wider Interests

In thinking about the purposes of planning, whether from the point of view of welfare economics or political economy, it is essential to make explicit whose—what set of peoples'—welfare it is intended to improve. This is vital in judging land use planning because of the genuine conflict of interests that exist between the local and the wider communities. What improves the welfare of undeveloped landowners harms the interests of owners of developed land. Development itself harms the interests of owners and occupiers of adjacent parcels but is likely to improve the welfare of a more widely defined group: the residents, and particularly, the would-be residents of a wider metropolitan region.

With many winners and very small individual gains, combining effectively to lobby for development is difficult and unlikely. However, relatively few losers, with much to lose individually, can easily combine to lobby effectively. The smaller the community that sets the rules or makes the decisions that determine whether a project can go ahead, the stronger the voice losers from development have in decisionmaking. Similar considerations (the insider-outsider problem) underpin the societal need for institutions to protect free trade. U.S. textile workers have much to lose as individuals if cheaper East Asian imports are granted unrestricted entry. U.S. consumers, as individuals, do not have to pay much extra if such imports are restricted. The consumer losses in total from trade barriers likely far outweigh the textile worker gains.

The same argument applies to development. The costs are significant for a relatively small number of individuals, but the benefits are spread thinly over many. Therefore, development is another common case of asymmetry in political action and leads to a case for planning to symmetrically represent the interest of the gainers from development and those of the losers. The more locally planning decisionmaking is concentrated, the more the insider-outsider problem arises, which inevitably empowers the voice (and votes) of "not in my backyard," or NIMBYism.

Some developments—most obviously transport infrastructure—can only be effectively planned for broad regions, even nations as a whole. These considerations highlight the issue of how effectively a given system of planning can represent and reconcile these broader conflicts.

Both the U.S. and the British planning or zoning systems are very much at the local end of this dimension of weight given to local compared with national interests. Indeed, the U.S. system arguably gives more weight to purely local interests than any other in the world. Zoning is, essentially, a right of the smallest unit of government and is routinely used to defend the interests

of the insiders, or those with a local vote. Explicitly discriminatory zoning was ruled illegal in the early 20th Century. Louisville, Kentucky, introduced zoning ordinances to stop African-Americans from buying houses in certain areas. This racially discriminatory zoning was designed explicitly to protect privileges and create new ghettos. The U.S. Supreme Court struck down such discriminatory zoning in 1917. Explicitly racial zoning laws may be unconstitutional, yet many communities enact zoning ordinances that have the effect of keeping low-income people out. Large minimum lot sizes—20 acres common in some communities in the Southwest—may not keep specific racial groups out of communities but surely keep out low-income people. Zoning for very high levels of single-family detached housing does the same.

In European eyes, U.S. minimum lot sizes are among the most inexplicable and seemingly irrational features, not only of U.S. zoning but of U.S. cities. They contribute massively to what Europeans perceive as U.S. urban sprawl and car-dependent urbanization. These lot sizes make the housing supply more inelastic, increasing housing costs and reducing affordability. One often hears about the housing affordability crisis in the Bay Area due to buildout. That statement is largely true in the sense that very few unbuilt lots are zoned for development. However, stand on the Golden Gate Bridge and look north, for example, and a mile away is Marin County, where some communities are zoned at minimum lot sizes of 75 acres. Many other communities have seemingly extravagant minimum lot size requirements. Although plenty of space for housing exists, that space is not zoned for it.

The British achieved a very similar outcome with Green Belts. They were originally conceived, not in Britain but in Vienna in 1857 (Cheshire, 2015), as quite narrow strips of parkland encircling large cities to provide 'green lungs' for densely packed urban residents. However, when they were introduced as a national policy in Britain in 1955 by a Conservative government, their purpose had been transformed into simple barriers to development in a great ring of the Home Counties (those counties surrounding London) nearly 17 times the area of the then administrative City of London, the London County Council, and extending from the North Sea almost to Aylesbury—125 kilometers in diameter. The minister who introduced the policy, Duncan Sandys, wrote: "Even if...neither green nor particularly attractive scenically, the major function of the Greenbelt was... to stop further urban development." That remains their function, as the national government has repeatedly confirmed since first publishing the National Planning Policy Framework in 2012. The purpose of Green Belts was to be empty spaces between cities to protect the Home Counties from the encroachment of London and force urban expansion to jump over Surrey or Hertfordshire to Northamptonshire, Cambridgeshire, or Hampshire. Unspoken, perhaps, was the fact that Green Belts also kept low-income people out of the conservative-voting Home Counties.

Like large minimum lot sizes, Green Belts, now established around all the bigger cities in England, create urban sprawl but a very British version of it. Urban areas have sharply defined boundaries—20 meters of travel takes one from an urban scene to an apparently rural one—but leapfrog out huge distances as people search for affordable housing space. York, 200 miles from central London, was one of London's fastest growing commuter train stations between 2001 and 2011. Although this growth did not involve many people, it was multiplied over many train stations well beyond London's Green Belt boundaries.

Planning Versus Restriction

None of the logic underlying the existence of zoning or planning suggests that the outcome imposes an overall restriction on development. In its origins, in the ancient cities of the Indus civilization, in the Greek cities of Asia Minor, notably Miletus, or the early phase of urbanization in the United States, starting with the Land Ordinance of 1785 but gaining traction with the New York Commissioners code for the growth of Manhattan's street plan in 1811, planning was a simple set of rules to establish the public good of an orderly street layout.² This code was made to plan for development and growth.

No rationale for planning provides an obvious case for wholesale restrictions on development, although their use to create specialized public goods certainly provides excellent arguments for prohibiting development in particular locations: New York's Central Park, London's Hampstead Heath, Yosemite, or Yellowstone. Increasingly, however, in both the United States and the United Kingdom, the zoning or planning system has generated an overall restriction on development.³

This restriction is partly due to any given restriction being, more or less, binding, depending on context. A four-floor height restriction in Russell, Kansas, would not affect the price of local office space, but the same restriction in Chicago would greatly increase it. If London's current Green Belt had been in place in 1823, it would not have affected housing costs in London. Not only was the city much smaller and its citizens poorer, but the available transport technology meant almost everyone walked to work, thus living as close to work as possible. The development of cheaper, faster transportation has greatly extended the geographical area of a city of any given population size. Although the land would have been low-value farmland in 1823, it is now prime residential land—or would be if available for building.

Given the previous discussion, unless some higher tier of government intervenes, almost inevitably, the constraints become more and more binding over time. Once zoned, the land becomes developed and occupied, and the interests of the owners of the developed land soon predominate if making decisions locally. The more decisionmaking is localized, the more powerful opposition to development—NIMBYism—is liable to become.

One needs to add the fact that the demand for both space in houses and yards around them is strongly income-elastic, so demand rises faster than income and far faster than population (Cheshire and Sheppard, 1998; Muellbauer, 2018). This means that a given constraint over time increases upward pressure on house and land prices. If surrounding land is not yet subject to zoning, the supply can adjust. This stipulation is not the case in the more populated and prosperous parts of either the United States or the United Kingdom. Jurisdictions already zoned, very large minimum lot sizes in the United States, Green Belts around cities, and local control of decisions in the United Kingdom prevent increasing densities. The same fixed constraints become increasingly binding over time, forcing up the real price of housing in the whole region. If one adds

² See Bertaud (2018) for an informed and fascinating discussion of the process.

³ For example, see Glaeser, Gyourko, and Saks (2005); Quigley and Raphael (2005); Cheshire and Sheppard (2002); or Hilber and Vermeulen (2016).

growth boundaries to the U.S. context—for example, around Portland, Oregon—then the upward pressure on prices is even more extreme.

A Better Balance of Local and Wider Societal Interests

Like the United States, both Switzerland and Germany are federal states. Switzerland is arguably even less centralized than the United States, with three official languages and local income taxes. France has a regional structure but is a centralized state. Germany, Switzerland, and France, however, all share national and regional input into spatial planning, a legal requirement governing the interrelationship between local, regional, and national planning and a detailed, rule-based master planning system. Such sweeping generalizations inevitably oversimplify but capture the essence of the systems.

In France, the national government does not only generate but, more importantly, imposes a legally binding national planning framework and obligations. The national government is also all-powerful in planning and implementing major infrastructure, such as national rail and major roads. In contrast, in Britain, most central government policies are either advisory or not stringently imposed, because LAPCs do things their own way and do not have common or verifiable reporting systems. In contrast, in France, major infrastructure planning is a purely national responsibility, and regional and local planners must have plans compatible with the national infrastructure plans.

France also has a strong metropolitan region planning capability. Paris has its government for its metropolitan region, Île-de-France, but 13 other substantial cities have a planning authority for their metropolitan regions: the communauté urbaine. These bodies have effective responsibility for all planning. Detailed plans mainly remain the responsibility of the smallest governmental units, communes, but again are required to be compatible with those of their communauté urbaine.

A common feature is the reciprocity with the more detailed plans of lower tiers of government having to be consistent with those of more strategic tiers and higher level and more strategic plans being required to take account of the plans adopted at lower levels. The common form is that communes draw up their plans in ways and to specifications that conform to the requirements and strategies of higher tiers of government, then these plans are voted on locally and, if adopted, become the plan—in considerable detail—for typically 5 to 10 years.

Germany and Switzerland likewise combine detailed planning at the most local level with a legally binding framework devised at the national level. Unlike the United States or Britain, these countries all have a strategic level of planning to both articulate and safeguard the interests of wider areas and legally binding powers to coordinate infrastructure and land use over wider regions. In the United States, some functions such as the interstate highway system are national and give a degree of leverage to Washington over purely local interests, but it is very weak.

Zoning, Planning, Local Finance, and Fiscal Systems

In the United States, zoning is decentralized with power resting in the smallest tier of government—so, too, by international standards, is the U.S. fiscal system. Local property taxes are a major source of revenue for local government and are retained locally. That is not the case in the

United Kingdom. Although the revenues from a local residential property tax, the Council Tax, account for approximately one-third of local authority expenditures, the bulk of the rest comes from grants from the central government. Taxes on business property (the uniform business rates) also generate revenue. The central government, however, redistributes all revenues so that the intended final outturn, in terms of revenues, to local governments is 'needs-based'—that is, a local community's final revenues reflect the obligations, size, and characteristics of its population, not the value of local property taxes. The result is that local government gains no—or negligible—net revenue with development. How much more a local community gets in revenue depends on the characteristics of the new residents and their assessed needs for public services. No direct revenue is derived from having more workplaces despite a legal obligation for local government to provide services. As Cheshire and Hilber (2008) estimate, this process is a serious disincentive for local communities to accept development, further reinforcing the local bias against development in politically controlled planning decisions.

In contrast, the more decentralized system in the United States (or Switzerland) empowers local governments to raise property taxes and retain revenues. This process is further reinforced in many jurisdictions in the United States using impact fees—levies on developers designed to pay for the additional local infrastructure and services needed to support the new residents that development brings. Ihlanfeldt and Shaughnessy (2004) showed that communities that imposed an impact fee were systematically less NIMBY compared with those that did not. Therefore, clear evidence from both the United Kingdom and the United States shows how zoning works out in practice and local tax structures influence zoning, not only by the form of the zoning laws but by the incentives local taxes generate. In Switzerland, the similar retention of the revenues from the local income tax encourages local communities to accept development and the new tax-paying residents that it brings.

It is equally true for the restrictions zoning or planning may impose on commercial development. Cheshire and Hilber (2008) identified the extent to which taxes on business property made local communities more reluctant to permit commercial property development from a change in the law that came into force in 1990 when the Uniform Business Rates replaced local business property taxes. Its effect was to convert taxes on business property into a national tax transparently. Prior to the change, business rates had been levied and collected locally, although the ultimate needsbased redistribution meant that, in the long run, the revenues generated made no ultimate net contribution to local authority revenues. The transparent and immediate loss of the revenue stream from commercial property made LAPCs significantly more reluctant to permit commercial development. However, in the United States, the stream of revenues from local business property is retained in local government coffers and seen as a source of subsidy to local residents. Businesses are thought to cost less to service than they bring in tax revenues compared with residential property. The result is that local communities in the United States-even where NIMBYism prevails regarding new domestic development—are anxious to attract business development both for the jobs contributed and the net flow of tax revenues. Sometimes, the attempt to attract commercial development leads to overgenerous tax breaks, and it has also been cited as a cause of overdevelopment, particularly of retail space.

Zoning for Environmental or Social Change

During the past 40 years or so, planners increasingly emphasized the use of zoning to promote essentially social or environmental goals. Britain's Green Belts have been retro-purposed as policies for compact cities and urban containment. Starting in Portland, Oregon, growth boundaries have been similarly promoted as instruments to achieve densification and lower energy consumption. Planning policies for mixed communities, aimed at achieving a social mix of rich and poor within the same neighborhood, have been promoted in the name of equality, giving low-income people a better chance in life. Where zoning restrictions have become more binding, pushing up house prices, inclusionary zoning has become popular—policies requiring developers to provide affordable housing within new developments as a condition of building. In Britain and several Continental European countries, planning policies to deter—in England, prevent—new retail in nontraditional town center locations have been imposed to "protect the High Street" and revive town centers. Most recently, a move has started for "20-minute (sometimes 15-minute) cities" aiming for all facilities to be within a 15- or 20-minute walk or cycling time for residents. Implementing this most recent policy often severely restricts traffic flows between neighborhoods (BBC, 2022).

To an urban economist interested in both cities and planning, this stream of new expectations on planning is difficult to understand. It is obvious that none directly reflects the underlying principles that provide the rationale for planning. Moreover, they all assume that changes in the built environment will cause the desired societal or environmental changes without analyzing the perverse incentives to which they may give rise, or to how and what extent human behavior responds to changes in the built environment.

At their worst, they reveal an ignorance about the complex processes leading to social problems and determining behavior, or in the case of 20-minute cities, ignorance even about cities themselves. Two obvious problems arise in attempting to employ policies that influence the form of the built environments, achieving social or environmental objectives. The first is that such policies can only influence new development, and because the stock of the existing built environment is so large relative to the flow of new construction, any influence will be extremely slow. With issues such as global warming, action—radical change—is needed in the short term. Effective policies must therefore influence the behavior of everybody, of the whole economy----not only at the margin of change. The second problem is that humans behave in complex ways, and zoning changes typically impact supply and, thus, generate price changes. As seen with Green Belts or urban growth boundaries, they increase housing costs over time and incentivize people to leapfrog them in their search for affordable space. With policies designed to protect town centers, there turns out to be a very substantial negative effect on total factor productivity in retail but no gain in town center retail employment or even town center shoppers (Bertrand and Kramarz, 2002; Cheshire, Hilber, and Kaplanis, 2015; Cheshire et al., 2022; Haskel and Sadun, 2012; Sadun, 2015; Schivardi and Viviano, 2011).

The attempts to widen the application of zoning and planning policies to achieve wider societal or environmental objectives seem fraught with difficulty overall. The evidence suggests that it is only

too easy to impose substantial economic costs for no significant improvement with respect to the intended outcomes or even to produce unintended outcomes damaging to the intended outcome.

Pulling It All Together

Real estate and zoning and planning systems are often intrinsically national and, in the case of the United States, always very local. A result tends to be that how people think about their systems is unusually insular. Even cosmopolitan people or academic analysts tend to assume implicitly that what happens in their town or country is the norm and that the system they know is universal. The result is an endemic insularity in thinking about zoning or planning when much can be learned from others who may do it differently and better.

The United States and United Kingdom systems are outliers in how much weight they give to purely local interests in their zoning systems. The original foundation document in the United States, the standard SZEA, empowered *local* governments to bring in zoning ordinances. Given the real conflicts of interest between local and wider societal costs and benefits of development, both countries suffer when it comes to urban development. Substantial economic costs are involved, with often damaging, unintended policy consequences.

Zoning and planning policies also interact in their effects with systems of local government finance and, again, vary widely across countries. In addition, zoning and land use policies almost always affect the supply of desired goods—living and commercial space and space in specific locations. Largely, the same constraint can have very different effects over time or in different places as a result. A given physical growth boundary might not have affected prices and costs if imposed in a city in 1925 but a very substantial one if it were still in place in 2020. Equally, a given height restriction in a small Midwestern city might not affect prices, but it would significantly affect prices and productivity if imposed in a large, prosperous city such as London.

The United Kingdom, particularly, and cities on the East and West coasts of the United States have developed a critical housing affordability crisis. The standard measure of housing affordability is the ratio of a median-priced house to median income. In London, the official measure of this ratio worsened from 4 in 1997 to almost 14 by 2021, with almost as big an increase in the region surrounding London. Comparable data are not available for U.S. cities, nor do the available data go back as far as 1997. However, one source—the Urban Reform Institute and Frontier Centre for Public Policy, Demographia (2023)—has data since 2004. The affordability ratio was 5.3 in Boston, Massachusetts, 3.5 in Portland, Oregon, and 7.9 in San Francisco, California, compared with ratios of 7.0, 7.0, and 11.8, respectively, in 2021. Demographia did not report London's affordability ratio for 2004, but it was 6.9 in 2005, rising to 8.0 in 2021. Even more extreme housing affordability worsening is observed in some other cities, which had the misfortune to inherit (or, in the case of cities in Korea, adopt) the British planning system. Auckland, New Zealand, may be the most unfortunate example.

The housing crisis is real, but the difficulty of implementing the radical planning reforms needed to resolve it is very severe indeed. In the United States, this difficulty is partly because of the fierce defense of local autonomy against Washington. This inbuilt aversion to change that Washington

imposes is greatly reinforced by the asset values and the community development patterns that the system has produced. Richer single-family home communities fiercely defend their home values, and the exclusive social mix minimum lot-size restrictions have generated.

Moreover, for essentially the same reasons that planning is no solution to urgent problems like climate change, so it is with policies to improve housing affordability. Incremental change to the built environment is so small relative to the stock of existing structures that democratic politicians have difficulty confronting the short-term political hits of reform with only the long-run resolution of problems. An electoral cycle is too short of time to reap votes when it has taken a generation to create the problem by not building enough new homes to accommodate local demand.

Acknowledgments

The author thanks the editors for helpful comments on drafts and many colleagues in various countries for the discussions over the years to sharpen ideas. All remaining errors are the author's responsibility.

Author

Paul Cheshire is professor emeritus of economic geography at the London School of Economics.

References

Bertrand, Marianne, and Francis Kramarz. 2002. "Does Entry Regulation Hinder Job Creation? Evidence from the French Retail Industry," *Quarterly Journal of Economics* 117 (4): 1369–1413.

Bertaud, Alain. 2018. Order Without Design. Cambridge, MA: MIT Press.

British Broadcasting Corporation (BBC). 2022. "Oxford's Controversial Low-Traffic Scheme Made Permanent." https://www.bbc.co.uk/news/uk-england-oxfordshire-62223867.

Cheshire, Paul C. 2015. "Are They Green *Belts* by Accident?" Centre for Economic Performance. http://spatial-economics.blogspot.co.uk/2015/05/are-they-green-belts-by-accident.html.

——. 2018. Broken Market or Broken Policy? The Unintended Consequences of Restrictive Planning," *National Institute Economic Review* 245 (1): R9–19.

Cheshire, Paul C., and Gerald H. Dericks. 2020. "Trophy Architects' and Design as Rent-Seeking: Quantifying Deadweight Losses in a Tightly Regulated Office Market," *Economica* 87 (348): 1078–1104.

Cheshire, Paul C., and Christian A. L. Hilber. 2008. "Office Space Supply Restrictions in Britain: The Political Economy of Market Revenge," *Economic Journal* 118 (529): F185–F221.

Cheshire, Paul C., Christian A. L. Hilber, and Ioannis Kaplanis. 2015. "Land Use Regulation and Productivity-Land Matters: Evidence from a UK Supermarket Chain," *Journal of Economic Geography* 15 (1): 43–73.

Cheshire, Paul C., Christian A. L. Hilber, Piero Montebruno, and Rosa Sanchis-Guarner. 2022. (*In*) *convenient Stores? What Do Policies Pushing Stores to Town Centres Actually Do?* Centre for Economic Performance (CEP) Discussion Paper No. 1894. London: CEP.

Cheshire, Paul C., and Stephen C. Sheppard. 1998. "Estimating the Demand for Housing, Land and Neighbourhood Characteristics," *Oxford Bulletin of Economics and Statistics* 60 (3): 357–382.

Cheshire, Paul C., and Stephen C. Sheppard. 2002. "Welfare Economics of Land Use Regulation," *Journal of Urban Economics* 52 (2): 242–296.

Glaeser, Edward L., Joe Gyourko, and Raven Saks. 2005. "Why is Manhattan so Expensive? Regulation and the Rise in Housing Prices," *Journal of Law and Economics* 48 (2): 331–369.

Haskel, Jonathon, and Raffaella Sadun. 2012. "Regulation and UK Retailing Productivity: Evidence From Microdata," *Economica* 79 (315): 425–448.

Hilber, Christian A. L., and Frédéric Robert-Nicoud. 2013. "On the Origins of Land Use Regulations: Theory and Evidence from US Metro Areas," *Journal of Urban Economics* 75 (1): 29–43.

Hilber, Christian A. L., and Wouter Vermeulen. 2016. "The Impact of Supply Constraints on House Prices in England," *Economic Journal* 126 (591): 358–405.

House of Lords (HOL). 2022. *Meeting Housing Demand: Built Environment Committee Report*. London: House of Lords Built Environment Committee.

Hseih, Chang-Tai, and Enrico Moretti. 2019. "Housing Constraints and Spatial Misallocation," *American Economic Review* 11 (2): 1–39.

Ihlanfeldt, Keith, and Timothy Shaughnessy. 2004. "An Empirical Investigation of the Effect of Impact Fees on Housing and Land Markets," *Regional Science and Urban Economics* 34 (6): 639–661.

Koster, Hans R. A., Jos van Ommeren, and Piet Rietveld. 2014. "Is the Sky the Limit? High-Rise Buildings and Office Rents," *Journal of Economic Geography* 14 (1): 125–153.

Muellbauer, John. 2018. "Housing, Debt and the Economy: A Tale of Two Countries," *National Institute Economic Review* 245 (1): R20–R33.

Organization for Economic Co-operation and Development (OECD). 2017a. *The Governance of Land Use in OECD Countries: Policy Analysis and Recommendations*. Paris: OECD Publishing.

——. 2017b. Land Use Planning Systems in the OECD: Country Fact Sheets. Paris: OECD Publishing.

Puga, Diego, and Gilles Duranton. 2019. Urban Growth and Its Aggregate Implications. CEPR Press discussion paper 14215. London: Centre for Economic Policy Research. https://cepr.org/publications/dp14215.

Quigley, John. M. and Steven Raphael. 2005. "Regulation and the High Cost of Housing in California," *American Economic Review: Papers and Proceedings* 95 (2): 323–328.

Sadun, Raffaella. 2015. "Does Planning Regulation Protect Independent Retailers?" *Review of Economics and Statistics* 97 (5): 983–1001.

Schivardi, Fabiano, and Eliana Viviano 2011. "Entry Barriers in Retail Trade," *Economic Journal* 121 (551): 145–170.

Sheppard, Stephen C. 1988. "The Qualitative Economics of Development Control," *Journal of Urban Economics* 24 (3): 310–330.

Sheppard, Stephen C., and Stephen Mayo. 2001. "Housing Supply and the Effects of Stochastic Development Control," *Journal of Housing Economics* 10 (2): 109–128.

Urban Reform Institute and Frontier Centre for Public Policy, Demographia. 2023. "Demographia International Housing Affordability Survey." http://www.demographia.com/.