



RESEARCH REPORT

Influencers, Bias, and Equity in Rezoning Cases

An Evaluation of Developer-Initiated Zoning Changes in Louisville, Kentucky

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Executive Summary

Baseline land-use policies—enshrined in the zoning maps most localities use to regulate building form and use—shape development in most US cities. But they limit landowners' ability to use their properties in any way they wish, such as by restricting the size or purpose of new development. Localities therefore allow landowners to propose rezonings, which change the underlying zoning district of a property to another classification through a map amendment. Rezoning is a discretionary process that culminates in a vote of the local legislative body, informed by a proposal's adherence to the local comprehensive plan, applicants' resources, and public opinion. This discretion raises questions about equitable application of the zoning code and deviations from the comprehensive plan. As such, understanding how local governments use, and potentially misuse, developer-initiated rezonings should be a key element of the study of contemporary land-use regulation. Yet research on rezonings is only in its infancy, in part because of limited transparency about their use.

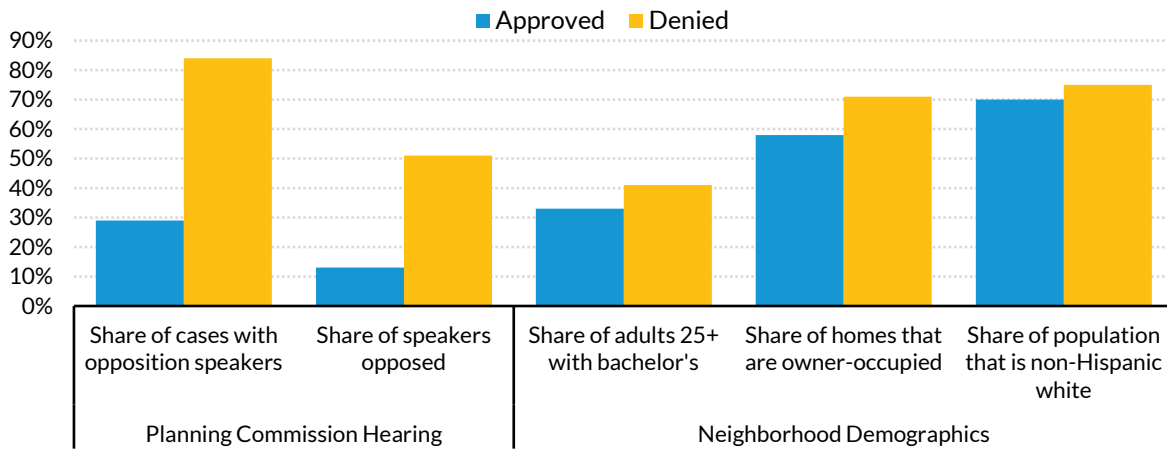
In this study, we extend that research by examining planning decisions in Louisville, Kentucky, between 2010 and 2020 to understand how frequently landowners received permits for new construction and applied for rezonings; the neighborhood demographics associated with each application; and the influence of the public review process on rezoning approval rates. Our research revealed the following key findings:

- About 83 percent of rezoning applications receive final approval from legislative bodies in Louisville, which we define as coterminous with Jefferson County and which includes both the Louisville–Jefferson County Metro Government and several incorporated cities with varying governance authority. The Louisville Metro Council is the legislative body responsible for most development decisions in the area, though there are 12 other local jurisdictions in Louisville that hold final approval over rezonings within their boundaries.
- Rejected rezoning applications account for just 4 percent of cases (the remaining cases have no action associated with them). These projects are, on average, more likely to have been proposed in higher-income neighborhoods, neighborhoods with a greater share of white residents, and neighborhoods that are exclusively zoned for single-family homes.

- The decisions of local legislative bodies are closely associated with the recommendations of the appointed Planning Commission, which conducts hearings related to rezonings.
- Controlling for other factors, we find rezoning approvals in Louisville are closely associated with the presence and tenor of speakers on the record at the commission’s hearings. Having more speakers at the hearings and a higher share of speakers opposed to a project are both associated with a higher likelihood of rejection.
- Rezoning applications for projects in neighborhoods with residents who are wealthier and more likely to be white attract more public speakers and more speakers opposed to applications.

The key differences between rezoning applications that were approved or denied by local legislatures in Louisville are charted in figure 1. Those that were denied had more speakers, more speakers in opposition, and were for projects in neighborhoods with higher education levels, a higher share of homeowners, and a greater proportion of the population that was non-Hispanic white.

FIGURE 1
Approval Rates for Louisville Rezoning Applications Were Associated with Public Speaker Presence and Tenor



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Source: Authors' analysis of Louisville rezoning dataset and 2016–20 American Community Survey data.

Note: Approved cases were in block groups with median household incomes of \$61,375, compared with \$69,249 for denied cases.

On the one hand, high approval rates for rezoning suggest a broad awareness that baseline zoning policies are inadequate to meet the demands of a growing jurisdiction. Variation in building use and form beyond by-right rules may be an acceptable way of responding to the need to build in neighborhoods where zoning policies may not have changed for many decades. Moreover, legislative

bodies' responses to public engagement indicate support for democratic participation and suggest that residents can successfully convince their representatives to oppose certain projects.

On the other hand, high rezoning approval rates suggest that many landowners have a relatively convenient method to increase the value of their properties by proposing projects that deviate from zoning standards. For these landowners, the rewards outweigh the risks, despite the costs of rezoning and the small possibility that their applications may be rejected. Additionally, the disproportionate involvement of residents from higher-income and often whiter neighborhoods during the planning process underscores that residents do not have equitable access to participation or equal ability to block deviations from outdated zoning codes. While it is possible that there is simply more support for new development in neighborhoods with more people of color and people with low incomes, it is also possible that attending public hearings is too time-consuming, costly, or otherwise inaccessible for many. Some residents, for example, may not be able to afford child care or have the ability to take off time from nonstandard work-hour jobs during these meetings. As a result, residents without the resources to engage may be disproportionately exposed to projects that pose environmental justice concerns, such as increased pollution, or projects that concentrate lower-income populations together. Simultaneously, residents in more well-resourced areas can block change in their neighborhoods by enforcing outdated, low-density living patterns and restricting development of new uses that rezoning would enable.

These outcomes raise questions about whether the current processes for approving rezoning applications are equitable and if they reinforce inequitable development. Other land-use-regulating jurisdictions, such as cities, towns, and villages, should emulate Louisville in evaluating their discretionary approval processes to “recognize and work to mitigate the impacts of existing plans and procedures that result in patterns of discrimination, displacement, or environmental injustice.”¹ Policymakers might also consider balancing public input and ensuring equitable adherence to the comprehensive plan and current zoning map by developing new policies aimed at augmenting the participation of residents with lower incomes. Potential avenues for this include generating racially and economically diverse, representative, and compensated deliberation or working groups; collecting randomized survey results on opinions related to projects through intentional outreach; or encouraging more participation from historically underrepresented residents by offering child care, providing compensation for attendance in deliberative sessions, or holding hearings in areas where residents who would be affected by rezonings live and congregate.

Jurisdictions should also evaluate the distribution of rezoning applications as one indication of market pressure and potentially adjust their respective zoning maps in advance of development

activity. Jurisdictions sometimes see repeated applications for similar types of rezonings in the same vicinity. These often signal that conditions have changed enough to warrant a systematic review of the comprehensive plan and development regulations. Local governments should ensure that an up-to-date, internally consistent comprehensive plan underpins all rezoning decisions.

Introduction

Comprehensive plans, planning processes, and zoning maps have helped create a segregated, inequitable status quo in cities across the United States, meaning local governments seeking to advance social and racial equity through their land-use regulations face a steep uphill battle that requires upending historically established precedents. Thanks to baseline zoning rules developed decades ago that limit construction to single-family homes on wide swaths of land, low-density neighborhoods often feature little new development. These constraints frequently encourage the creation of exclusive neighborhoods filled with people with higher incomes who are more likely to be white. But baseline zoning can change: local governments offer landowners the ability to apply for rezonings, enabling them to develop beyond what is allowed “by right” and instead build following the rules of a different zoning district.

The rezoning process is a discretionary one, meaning it reflects local decisionmakers’ values and priorities in the context of public hearings and review by multiple public bodies. These discretionary practices raise questions about the equitable application of zoning policies, as applicants’ resources and surrounding neighbors’ opinions can sway decisionmakers’ choices about whether to allow departures from the zoning map. Their use also influences the degree to which developers can respond to market demand for housing and other needs, as well as whether developers equitably distribute new construction across different communities. As such, understanding how local governments use, and potentially misuse, rezonings should be a key element of the study of contemporary land-use regulation. Yet research on this subject is only in its infancy, in part because of limited transparency around the use and scope of developer-initiated rezoning.

In this report, we examine data on development activity in Louisville, Kentucky, between 2010 and 2020 to understand how frequently landowners received building permits for new construction and applied for rezonings; the neighborhood demographics associated with each application; and the association between the public review process and approval outcomes. We specifically explore the link between the volume and tenor of public hearings (i.e., the number of speakers and their opinions about proposed projects) and the decisions by local legislatures about whether to approve applications. These legislative bodies include the Louisville–Jefferson County Metro Council, which makes final decisions for most of Louisville, and the councils of 12 suburban jurisdictions that hold that power within their boundaries. Our analysis shows that, at least to a degree, discretionary planning decisionmaking in Louisville—implemented through ostensibly race-blind, well-intentioned, careful, and democratic processes—reinforces longstanding residential patterns established by zoning rules and contributes to

segregation.² This case study suggests that more can be done to ensure equitable implementation of discretionary processes in land-use regulations. Our findings also indicate the need to intentionally rebalance public participation in a way that promotes the views of people who currently rarely engage and to reconsider the approval of piecemeal, developer-initiated rezonings that incrementally adjust the zoning map at different rates across poor and wealthy neighborhoods.

As expected, the economic demand for development—indicated by the volume of new construction permits—is highest in neighborhoods with the most well-off residents. Developers submit new residential building permits in neighborhoods with the highest-income residents seven times as frequently as they do in neighborhoods with the lowest-income residents. This difference is, to a large degree, the product of permitting for single-family homes on sparsely developed land at Louisville’s periphery, where non-Hispanic white residents also predominate. Applications for rezoning—which, when approved, allow projects that deviate from baseline zoning—are roughly evenly distributed across Louisville, with moderately more in neighborhoods with residents with higher incomes. We calculate that developers request a rezoning for about 1 in every 3 permits for new construction.

Local legislatures approve most developer-initiated rezonings; we find that these elected bodies reject less than 10 percent of applications, possibly because of a preapproval process that involves extensive discussions between planning staff and project applicants. Rezoning in Louisville, as in many other jurisdictions, are therefore extremely well-used tools, indicating that by-right zoning largely functions as guidance for many new projects, rather than being enforced rigorously. This may mean that landowners are abusing the rezoning process to ignore baseline land-use regulations or that Louisville’s decisionmakers agree that the zoning maps, in effect, are inapplicable to a large share of development. Because of a lack of data, our research does not assess whether approved rezonings produced development that better matches Louisville’s comprehensive plan than existing zoning would have allowed or if approved projects moved further away from that publicly endorsed vision for the region’s growth.

Yet rezoning approvals are unevenly distributed: we find that approval rates decline as neighborhood income rises. While local legislatures approve 98 percent of rezoning applications in the quartile of neighborhoods with the lowest incomes, they approve only 93 percent in higher-income quartiles. As such, despite featuring higher development demand, local legislatures ultimately approve a lower number of rezonings in higher-income neighborhoods than in neighborhoods with the lowest incomes.

One explanatory factor for declining approval rates as neighborhood incomes increase is the presence of speakers—particularly opponents—at public hearings for projects held by Louisville’s Planning Commission. Hearings for projects in the highest-income neighborhoods attract twice as many speakers as those in the lowest-income communities, and on average, a far higher share of the speakers in high-income neighborhoods is opposed to rezoning applications. Local legislative decisions about the fate of proposed rezonings are closely associated with the character of public involvement. The result of this approach is that neighborhoods with low built densities—whose residents have higher incomes, are more likely to be white, and are more likely to participate in public hearings—are more likely to remain in their current physical state compared with neighborhoods with more residents with lower incomes, higher shares of people of color, and higher built densities.

These patterns of rezoning approval rates have varying potential implications for equity. On the one hand, project approvals in low-income neighborhoods may bring much-needed investment to these areas, which may be one explanation for lower rates of public participation therein. And legislative votes tipping in line with participants' support or opposition suggest legislators' commitment to participatory democracy. On the other hand, rezoning approvals also indicate that lower-income neighborhoods are subject to more developer-initiated deviations from baseline zoning, potentially exposing them to higher risks of negative environmental impacts from new projects. These approvals also imply that residents of higher-income neighborhoods—armed with greater time and resources to attend meetings—can successfully put up a fight against changes to their zoning codes, which were themselves historically designed to maintain race- and class-based exclusion. One consequence of this resistance may be that residents of wealthier neighborhoods reinforce racial and social segregation by discouraging noncompliant projects in their communities; another is that Louisville may be inhibiting needed new development in neighborhoods that offer the best access to opportunity.

Other localities seeking to encourage more equitable development outcomes should also examine the frequency and geospatial distribution of rezoning applications to weigh market demands against publicly developed baseline zoning standards. They should evaluate how residents in higher-income neighborhoods leverage public participation to prevent new development. Without this type of approach, land-use decisionmaking may follow the trends we have identified in Louisville: market pressure to revise the zoning map piece by piece, contextualized by deepening neighborhood polarization between more densely populated, lower-income neighborhoods subject to developer interests and more sparsely populated, higher-income areas whose residents fight to preserve historically exclusionary zoning policies.

Our findings also pinpoint the need for additional support for residents from lower-income neighborhoods to engage in public participation. The current hearings associated with rezonings—while manifestly influential for decisionmakers—fail to engage all residents equally. Localities should consider developing new approaches to public engagement that allow for neighborhood feedback about projects but do not result in disproportionate engagement from residents from higher-income neighborhoods.

Rezoning: A Discretionary Tool to Alter the Zoning Map, Parcel by Parcel

Land-use regulations help determine the form and use of buildings throughout cities, towns, villages, and even many rural areas, interacting with the real-estate market to shape neighborhood design and demographics. Local governments generally implement these regulations, though states dictate their range of possible action and often impose minimum requirements. Such regulations typically include a zoning code and a map that identify by-right development options for each parcel of land—in other words, which building forms and uses are allowed with only administrative review, and where (Freemark et al. 2022). Local legislatures such as city councils vote on the code and its associated map. At that point, developers abiding by those by-right rules can generally advance their projects by demonstrating that they have met the requirements and received sign-off from the relevant planning department.

By-right zoning policies are intentionally designed to aid or impair new construction, encouraging it in some locations and not others. Municipalities sometimes alter by-right zoning by their own initiative, such as through parcel-specific, neighborhood-specific, or citywide changes to the zoning map and code. They may do so in the pursuit of achieving local comprehensive planning goals such as economic growth or transit-oriented development.

Landowners, too, can request changes if they believe that following the specifics of the by-right code would inhibit their ability to construct their proposed projects. In some cases, these proposals may appeal to both private developers and local stakeholders. A parcel, for example, might have certain physical characteristics that make it impossible to both abide by zoning rules and build a financially feasible structure, despite a jurisdiction's interest in promoting investment in that community. Another parcel might be apt for development into apartments because of its location near transit but face limitations due to existing zoning rules that allow only single-family homes on the site.

When these instances arise, developers can request the use of a suite of options to allow projects that diverge from by-right zoning—but only after a series of deliberations by appointed and elected officials that offer opportunities for public comment. The rezonings we study in this report represent the most extreme of those options. When approved, they allow cities to alter the zoning map such that rules relating to a developer's property change from one zoning district to another, which can convey allowances for new building forms and building uses. These developer-initiated rezonings are typically referred to as map amendments (localities also sometimes initiate map amendments). Examples of recent developer-initiated and approved rezonings in Louisville, paradigmatic of those in many cities throughout the United States, include the following:

- A 2020 rezoning of a parcel at 7703 Cedar Creek Road, in the Ashville neighborhood of southeast Louisville, from the R4 district (which only allows single-family homes) to the R7 district to allow the construction of a 168-unit apartment building.³
- A 2019 rezoning of a parcel at 998 Goss Avenue, in the near-downtown Germantown neighborhood, from the R6 district (which does not allow commercial uses) to the C1 district to allow retail use of the land.⁴
- A 2018 rezoning of a downtown parcel at 325 West Main Street, from the M3 district (which does not allow hotels) to the C3 district to allow an existing hotel on the site to conform with zoning rules.⁵
- A 2017 rezoning of a parcel at 6110 Goalby Drive, in the Pleasure Ridge Park neighborhood of southwest Louisville, from the R5A district (which allows townhomes) to the planned residential district to allow the construction of 24 townhomes using a site configuration that would not be feasible under the R5A district rules.⁶

Local planning rules typically mandate an extensive review process for developer-initiated rezonings, though the specifics are locality dependent. Developers often submit a preliminary proposal to the local planning department for review. They then inform neighbors about the project and present plans to the appointed planning commission, at which point members of the public can testify to the proposal's merits. The commission makes a recommendation, after which the local legislature must vote to approve or deny the application.

Planned unit developments (PUDs), also known as planned developments or floating zones, are a frequently used form of rezoning that typically apply to large areas and to various project types (in some cities, all projects of a certain size and type must undergo PUD rezonings). Nationally, PUDs have become increasingly popular as a means for local governments to negotiate with developers over the

specific aspects of large new developments, which can have major implications for a community because of their scale (Mandelker 2017; Reno 1963). Zoning ordinances describe the development types potentially allowed within a PUD, which then can be associated with a specific part of the zoning map. Zoning codes often require landowners applying for a PUD to submit a holistic, multiparcel, and sometimes mixed-use plan that includes buildings, open space, and transportation elements—all of which are expected to meet the goals of a locality’s comprehensive plan. In return for rezoning approval, developers applying for PUDs are usually expected to provide some benefit to the community such as affordable housing, transportation management measures, and public space.

There is some ambiguity between legally allowed developer-initiated rezonings—whether or not they incorporate planned development procedures—and the practice of “spot zoning,” which is banned in many states. Courts have ruled that spot zoning is illegal because it inappropriately preferences one landowner and might give them more rights to build on their properties than their neighbors. In contrast, parcel-by-parcel rezonings must meet a “rational basis,” meaning the developer must demonstrate that the rezoning serves the public purpose, is consistent with the comprehensive plan, and is compatible with the surroundings (Mandelker 2016). This can occur in instances in which the developer makes the case that the current zoning map does not appropriately reflect comprehensive plan goals. In some cases, local governments impose additional requirements in association with developer-initiated rezonings, such as the provision of on-site affordable housing.

In this report, we focus on rezonings. But rezonings are only the most dramatic of several potential mechanisms to alter application of the zoning code. Land-use regulations also include a suite of more modest flexibility measures that have been used by local governments since the earliest days of zoning policy and are designed to provide a “safety valve” for landowners who cannot make development on their property work financially or physically (Green 1951). Flexibility measures include variances, conditional uses, special exceptions, waivers, and other approaches (box 1), which developers sometimes combine with rezonings. Typically, zoning “relief” provided through flexibility measures requires developers or landowners to show that the unique conditions of their parcels produce “practical difficulties or unnecessary hardships” and to demonstrate that changes would not “alter the essential character of the neighborhood” (Fischer, Stahl, and Baird-Zars 2022). The goal of such flexibility measures—unlike rezonings—is not to produce wholesale alterations to zoning policy, which requires action by local legislatures to change the zoning map or code (Bryden 1977). Rather, it is to prevent the zoning code from being used as a mechanism to confiscate property under baseline zoning policies that do not work in every possible case (Johannessen 1989). Jurisdictions, as noted, also

sometimes use flexibility measures to reinforce policies described in the comprehensive plan that have not yet been executed in zoning directly.

BOX 1

Zoning Flexibility Tools Beyond Rezoning

Flexibility measures encompass a wide range of exceptions to the baseline requirements of the zoning code. Each locality sets out standards, established under state law and outlined in the zoning ordinance, that project proposers must meet to receive exceptions. In certain cases, when impacts to the surrounding neighborhood are negligible—such as variance requirements to erect a tall fence—the planning administrator may approve exceptions, with a right of appeal by both the applicant and surrounding neighbors. Other processes may have multiple levels of approvals and appeals, sometimes involving not just administrative review but also the perspectives of appointed boards and commissions such as the planning/zoning commission, board of zoning adjustment/appeals (ZBA), or the local legislature and executive. Many such measures include opportunities for public involvement and additional feedback on projects, such as through design or environmental review (Scheer 2012). Examples of exceptions to the baseline zoning code follow.

Conditional use permits, sometimes known as special exceptions. Conditional use permits allow landowners to request the establishment of a certain use on a property or in a building that otherwise is not permitted by right because it is understood to produce intense impacts on the surrounding neighborhood. Conditional uses are generally predefined and enumerated for each zoning district; they typically require review and approval from local agencies and the local legislative body or planning commission, as well as opportunities for public input, before they are issued by the relevant jurisdiction. Conditional use permits are often required for potentially noxious or dangerous uses, such as garbage collection, or for uses perceived to be—but often not actually—detrimental to the community, such as bars, homeless shelters, and senior homes. Such permits are only valid if certain conditions are met (such as including measures to mitigate potential adverse impacts), which are determined either within the code or through a hearing process. Each locality sets basic standards for allowing permits, patterned under state guidelines. Utah law, for example, allows conditional uses if “reasonable conditions” are applied that “mitigate the reasonable anticipated detrimental effects” of the proposed use and ensure the public’s health and welfare (Green 2014). The legislative body can revoke the permits if the property owner fails to meet or maintain these conditions.

Bonus and incentive zoning. Many cities offer developers zoning incentives to advance local goals. A locality, for example, may offer increased allowed floor area ratios if a developer commits to providing a certain number of affordable housing units; a reduction in car parking requirements in exchange for the provision of secure bicycle parking; or an expansion in allowed building height with the provision of publicly accessible park space. These policies provide landowners with a list of possible interventions they can undertake in exchange for permission to build beyond baseline zoning (Kayden 1992). Local

zoning administrators typically review proposals during the project review process, and local legislatures or appointed bodies do not need to take action.

Variations and waivers. Variations are requests from developers for divergences from the zoning code that are explicitly not allowed. Developers can make the argument that this type of divergence is required to avoid “unnecessary hardship” because of a lot’s unique characteristics that cause “practical difficulties” (Bryden 1977), though decisionmakers generally do not consider financial hardship alone as legally adequate to justify granting a variance (Reynolds 1999). This practice can allow landowners to use land in ways that are otherwise limited by zoning policy (Johannessen 1989). ZBAs typically oversee variance review processes by examining requests, submitting them for public review, and determining whether such flexibility runs counter to the local comprehensive plan (if applicable) or harms the public interest. In some cases, variations and waivers also involve legislative body approval.

These are two general types of variations. **Bulk variations**, which are more common, allow divergence in building form from the code. Examples include modifications to development height, impervious coverage, or setback requirements. In some cities, as in Louisville, waivers can eliminate those requirements altogether. **Use variations** allow for divergence in property use. Examples include allowing residential uses in a commercial zone, such as converting an abandoned warehouse into apartments. Use variations are less common, and some states, including Kentucky, have even banned them. In either case, courts have ruled that local governments should use variations rarely and only in circumstances that preserve the property rights of certain nonapplicants, such as neighbors (Reynolds 1999).

Zoning Processes: Often Discretionary and Informed by Politics and Neighbors

At least theoretically, projects following by-right zoning regulations can advance with little more than administrative approvals from the planning department in most cities. But developers seeking zoning changes encounter a more complex and challenging path to project approval. Rezoning, as opposed to by-right development, inherently alter the local government’s existing policy on how to develop a specific parcel of land. As such, members of planning commissions, ZBAs, local legislatures, and other land-use-relevant bodies have considerable discretion throughout the rezoning approval process. This discretion may be informed by the comprehensive plan, resident input through public meetings, as well as the views of other interested groups, such as those proposing the project. In any case, discretion can allow for democratic input but also potentially result in inequitable outcomes.

Decisions related to rezoning often involve bargaining between local government and landowners, with localities making “particularized decisions regarding land development on a case-by-case basis” (Green 2014: 389). In conversations with us for this report, planning staff in Louisville noted that the

development process for more complicated projects typically involves developers and their representatives (e.g., land-use attorneys) discussing their project ideas with department staff, who then present trade-offs related to different possible approaches; these might include altering a project to meet by-right standards or applying for a rezoning, variance, waiver, conditional use, or some combination of the four. The developer then generally proposes a final project based on that feedback. At the end of the process, local appointed or elected officials decide whether to approve zoning exceptions or rezonings based on staff guidance, informed by their own views and public feedback during the review process.

These decisions generally meet judicial standards if they promote the public welfare and help achieve the goals of the comprehensive plan, but courts rarely intervene to rule local zoning choices inappropriate. One explanation is that state requirements for such discretionary decisions are often quite vague (Fraietta 2013; Green 2014). This sort of ad hoc planning can be both an asset and a deficit. Fischer, Stahl, and Baird-Zars (2022), for example, show how flexibility played a useful role in allowing New York City to recover from a disaster through means not permitted in baseline zoning.

Alternatively, if discretionary choices are designed to appease nonrepresentative interest groups rather than to fulfill the goals of the comprehensive plan or the public interest overall, they may not result in the most effective or equitable outcomes. If rezonings, for example, convey a transfer of wealth to landowners—allowing them to increase their property’s value by developing more than their neighbors can—they have an incentive to request political officials to make changes on their behalf. This could lead to a problematic form of “political capture” that goes against the public interest (Mandelker 2016). Such discretion can also undermine state efforts to regulate land-use policy by encouraging localities to depart from state-desired standards (Bryden 1977). Developer-initiated zoning changes also grant local governments the ability to negotiate with landowners for public benefits; had localities rezoned parcels in advance of anticipated development, they would not be able to, for example, extract concessions such as on-site affordable housing or green space (Manville and Osman 2017).

In this section, we summarize research on the use of discretion in zoning processes, including both rezonings and other discretionary tools such as variances. In recent decades, local legislatures have increasingly granted approvals for discretionary requests, indicating that the standard operating procedure for development in many US cities lies outside of the by-right zoning map. Moreover, scholars have shown that because of developers' dependence on the discretion of elected and appointed policymakers, flexibility measures such as rezonings, conditional use permits, and variances reinforce existing inequities by following the desires of wealthier, generally white residents and monied development interests over those of poorer residents or people of color—especially since the former

group is more likely to participate in elections and public review processes. We build on these conclusions in our case study of Louisville later in this report.

APPROVAL AND DENIAL RATES

Despite their theoretically exceptional nature, measures that allow developers to deviate from by-right zoning—from rezonings to variances to conditional use permits—are widespread, meaning they play more than a marginal role in shaping communities (Whittemore 2012). Developers have increasingly adopted these measures over time (Fraietta 2013), though rates of deviation from by-right zoning vary by locality and project type. Some cities, like Boston, have considerably higher variance utilization than other cities such as Los Angeles or New York (Infranca and Farr 2022). And project reviews that include a discretionary element, such as votes by appointed bodies like planning commissions or legislative bodies like city councils, are more common for larger developments such as multifamily housing. O'Neill, Gualco-Nelson, and Biber (2018) found that many jurisdictions in the San Francisco Bay Area impose such reviews on all projects containing five or more units.

Localities approve most projects undergoing such discretionary review, even though flexibility, at least in theory, is intended to provide support for edge cases (Reynolds 1999). Among the research papers we reviewed describing the results of discretionary review processes, all found that legislative bodies approved significantly more applications than they denied. For variances, researchers identified approval rates of 70 percent or higher (Dispensa 2004; Fischer, Stahl, and Baird-Zars 2022; Infranca and Farr 2022; Owens 2004; Sampson 2007; Zhao 2011). At the extremes, one study of Wisconsin found several municipalities that had approved 100 percent of variance applications (Madry 2007). Infranca and Farr (2022: 1) argue that, in Boston, “little attention is given to the legal requirements of a variance”—meaning granting variances has become standard practice.

One explanation for these high approval rates is that local governments are focused on responding to the needs of the private market (Kayden 1992). In this way, the “safety valve” of zoning flexibility has steadily transformed into a “floodgate opened regularly by political pressure” (Kayden 1992: 567), and allowances for variation from by-right rules have become a widespread form of “invisible zoning.” Exceptions to by-right zoning, Fawaz argues, are “a planning strategy that introduces a margin of maneuver for planning authorities, without conceding radical changes in the structure organising access to the city” (2017: 1938). Local officials more interested in encouraging property development than enforcing the preexisting zoning code may view by-right zoning as more of a recommendation than as the baseline for future development (especially if, as noted above, rezonings present the opportunity to negotiate for public benefits in association with new construction). In some cases, the public bodies

making choices about the use of zoning flexibility may do so without much regard to the stated hardship and public benefit requirements of flexibility codes, since states grant local governments wide discretion over local zoning policy (Madry 2007).

Another explanation for the frequent use of zoning flexibility—and high approval rates—is that in some communities, many projects reviewed for rezonings, variances, and conditional uses undergo a long preapproval period before applicants submit them for planning commission or local legislative approval (Fischer, Stahl, and Baird-Zars 2022). This preapproval sometimes involves detailed back-and-forth with local planning staff and can provide information that helps project sponsors refine applications to meet local goals. This process may also encourage developers without viable plans to not apply. Indeed, Zhao’s study (2011) found that localities were more likely to grant variances when the local planning office supported the project. However, not all residents or developers share equal capacity or resources required to undergo such intensive preparatory processes. As a result, the high approval rates for these flexibility measures have implications for equitable and inequitable development, according to who can pay the costs associated with additional review processes.

The people involved in the decisionmaking process sometimes influence outcomes as well, even if they do not sit on the relevant decisionmaking body. Planning commissions, for example, frequently hold hearings related to rezonings that invite residents, developers, and others interested in the zoning process to discuss appropriate ways to develop the community. Some researchers find that policymakers respond to the desires of their constituents; applications for zoning flexibility are more likely to be denied when there are opponents present, especially if opponents are elected local representatives (Been, Madar, and McDonnell 2014; Madry 2007; Zhao 2011). Other studies, however, have found that public opposition has no influence on decisionmakers granting variance requests (Infranca and Farr 2022).

DECISIONMAKERS OFTEN GRANT FLEXIBILITY IN ZONING PROCESSES INEQUITABLY

Despite the relative paucity of studies examining the use, frequency, and impact of zoning flexibility measures, particularly rezonings, several researchers have cited case studies of individual jurisdictions to understand whether they are used in an equitable way. We define equitable public action as similar rates of approval between neighborhoods, no matter the demographic composition of their residents. Researchers broadly find that the way localities grant flexibility often reinforces existing inequities and typically reflects the preferences of groups that are most politically connected (Been, Madar, and McDonnell 2014; Fischer, Stahl, and Baird-Zars 2022). In this way, power and money can have a greater impact on outcomes than the jurisdiction’s broad public interest.

Scholars find that landowners usually pursue rezonings to increase their property values in the context of development demand. Gabbe (2018) finds that rezoning applications are most likely on parcels that are currently underdeveloped compared with their surroundings, where little local political resistance is present. And Munneke (2005) notes that rezonings are more sought after when that change would dramatically increase land value over current policy. The same economic motive is true for variances; Zhao (2011) finds that they are most common where land is most valuable.

Residents of wealthy, often whiter neighborhoods, however, appear to disproportionately resist deviations from baseline zoning when they perceive them as likely to reduce their property values or alter the “character” of their neighborhoods (Been, Madar, and McDonnell 2014).⁷ Gabbe (2018), for example, found that neighborhoods with many homeowners had fewer rezonings. One explanation for this phenomenon could be that decisionmakers are more likely to reject proposed projects when opponents make their voices heard. By incorporating extensive public hearings into the approval process, localities allow “neighborhood defenders” to “obstruct unwanted incursions in their communities” (Einstein, Glick, and Palmer 2019: 82). Research into homeowners’ influence over rezonings affirms that these “home voters” participate more and react more strongly to higher levels of development by arguing against new projects, thereby convincing decisionmakers to deny applications for zoning flexibility even if they are in a locality’s best interest. As Been, Madar, and McDonnell note, policymakers should be aware that owner-occupied and wealthier “neighborhood opposition to land-use change likely tilts land-use decisions to be unfairly exclusionary and more risk averse than is optimal” (2014: 260).

On the other hand, neighborhoods in which residents holding less political capital may not be able to defend themselves against rezonings or other types of zoning flexibility for projects that lower property values, such as noxious uses like trash disposal (Cleveland 2016). In Baltimore, Maryland, Lord and Norquist (2010) show a historical association between the locations of city-approved, special-use permits for noxious facilities (e.g., incinerators) and neighborhoods with higher shares of people of color and people with low incomes. Whittemore (2017) similarly shows that rezonings before 1985 in Durham, North Carolina, permitting industrial uses were largely for projects located in majority-Black neighborhoods. In both cases, however, the correlation between discretionary approvals for such uses and higher shares of people of color in affected neighborhoods has declined in recent years—though the long-term impacts of prior approvals remain a concern.

It is unclear whether the geospatial distribution of projects that leverage zoning flexibility is a product of the allowance for such measures (i.e., whether the local government allows them in the first place) or variation in local demand for new development (i.e., whether private-market developers

expect to profit from new construction). But research suggests that allowances for zoning flexibility tend to reinforce existing demographic residential patterns, no matter the cause. One study, for example, found that conditional use applications for multifamily rental housing were significantly more common in neighborhoods with a greater share of Black residents (Cleveland 2016). The flexibility policy as used, then, could serve to concentrate Black residents—who are disproportionately more likely to be renters—in the same parts of town in which they already live.

Ultimately, researchers largely agree that when given the opportunity to make discretionary choices about development projects, local decisionmakers tend to follow the desires of the wealthiest and most politically connected residents. As such, they make choices that lead to different outcomes for people with high incomes and neighborhoods with high levels of wealth, further entrenching economic and racial segregation. In this study, we find some evidence for these concerning outcomes in Louisville.

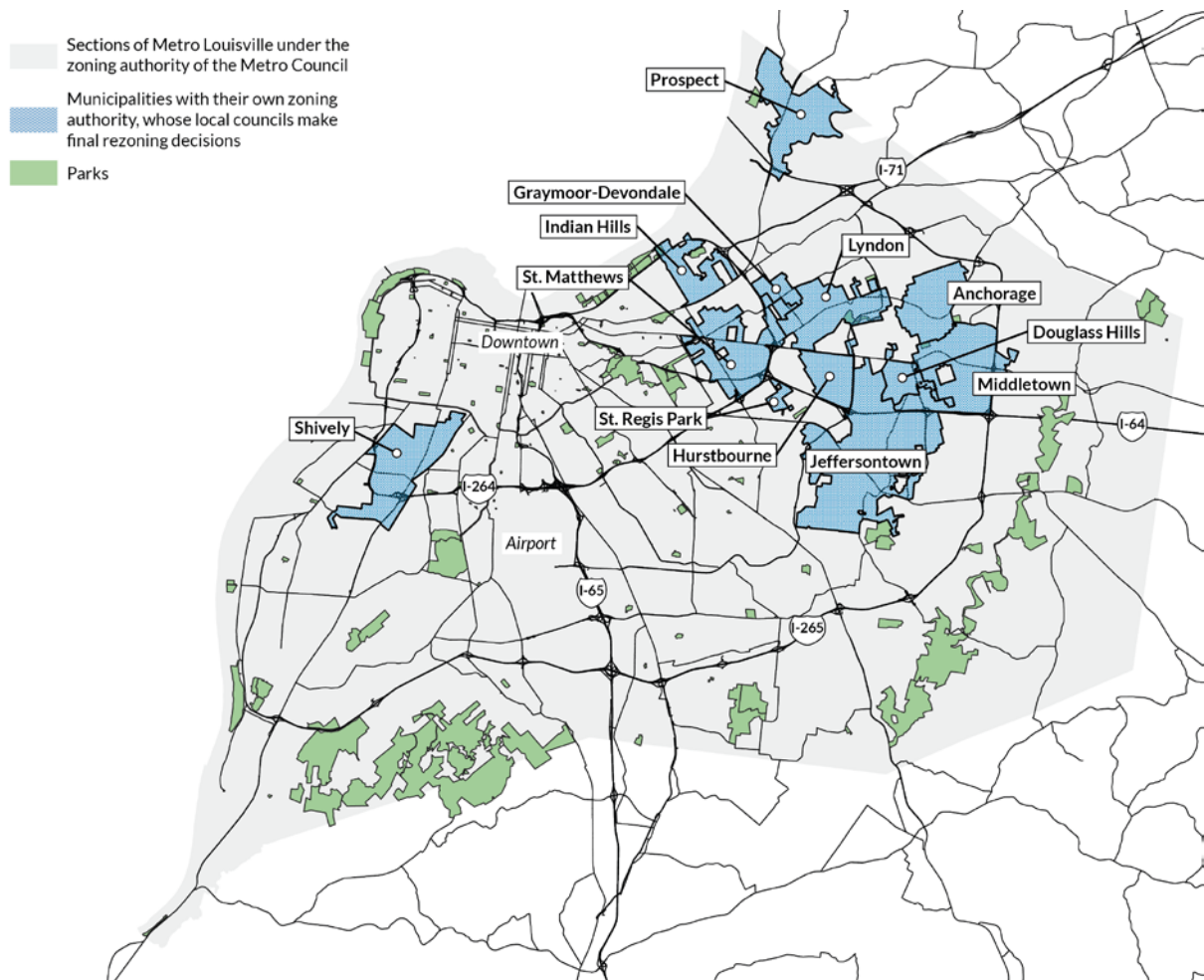
Rezoning in the Context of Louisville’s Metropolitan Governance

Louisville is the largest city in Kentucky and the state’s historical trading port on the Ohio River. Founded in 1778, the city underwent major governance changes in 2003 when it merged with the encompassing Jefferson County to produce the Louisville–Jefferson County Metro Government. More than 80 incorporated municipalities remain within its borders, but the city of Louisville itself no longer exists as a standalone entity. A directly elected mayor and a 26-member elected council oversee the Metro Government. From here, we refer to the combined Louisville–Jefferson County jurisdiction as “Louisville” or the “Metro” as a shorthand for legibility.⁸

Louisville Metro’s Office of Planning and Design Services (PDS) oversees the development and implementation of the Metro’s comprehensive plan (Plan 2040), which became effective January 1, 2019. It also oversees the Metro’s zoning map and regulatory text, called the Land Development Code (LDC), which varies somewhat within each of the 12 municipalities in the county that retain their own zoning authority.⁹ Stated briefly, the process guiding the application of land-use law in Louisville is a combination of comprehensive planning, zoning legislation, and map amendments paired with the flexibility measures described above. Plan 2040 informs Louisville’s LDC, which has evolved gradually over time from rules established jointly by city and council planning departments in 1963 to their current form. The LDC does not always align directly with the comprehensive plan, but the LDC ultimately regulates by-right building form and use, including through special standards embedded in the code for certain uses, until it becomes apparent that it must change to better reflect Plan 2040.

The PDS oversees the work of several boards, including a Planning Commission and a board of zoning adjustment (BZA), each of which has appointed members, most of whom are chosen by the Metro mayor. One of 13 legislative bodies—the Metro Council or the councils of 12 suburban municipalities with their own authority—determines the final decisions on development policy (figure 2).¹⁰ All of Metro Louisville—under the final authority of the Metro Council or not—must follow the goals of the comprehensive plan. The Metro Planning Commission must review all projects throughout the county before they move on to review by the appropriate local legislature.

FIGURE 2
Most of Louisville Is under the Zoning Authority of the Metro Council, but Some Municipalities Have Councils that Make Final Rezoning Decisions



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Source: The authors, based on Louisville/Jefferson County Information Consortium (LOJIC) Open GeoSpatial Data.

Note: There are other nonmapped municipalities that are within Jefferson County but do not have zoning authority.

The LDC's baseline zoning is heavily oriented toward single-family residential uses. Of the Metro's total land area, 73 percent allows only single-family homes by right, and 86 percent of land permitting any residential uses allows only the construction of single-family homes by right (59 percent of residential land is specifically zoned R4, the most common district designation). R4 zones require minimum parcel sizes of 9,000 square feet per housing unit, which limits the ability to build in these zones; such requirements have been in place for more than half a century for much of the county. The county's goal was, in part, to maintain exclusive, "very fine residential areas" and to "create more restricted single-family districts," according to the 1958 comprehensive plan.¹¹

Louisville Metro's LDC includes provisions for developer-initiated rezonings, officially labeled as zoning and form district map amendments, which lengthen the review process and increase project costs. The applicant must, in order:

1. Submit a preapplication for review and comment by the PDS regarding the project's compliance with the comprehensive plan, its impacts on zoning and form district and subdivision regulations, and site characteristics specific to the project.
2. Hold an informational meeting for neighbors one evening, at least two weeks after mailing a letter to neighbors, policymakers, and PDS staff.
3. Submit a formal application to the PDS director no more than 90 days after the informational meeting demonstrating a plan for utilities and public services provision to the project. The application must also show how the proposed change complies with the comprehensive plan, why the existing zoning or form district is inappropriate, or what major changes to the neighborhood unanticipated by the comprehensive plan have changed the area in a way affecting the project.
4. Receive additional comments by PDS.
5. Undergo review by the Metro's Land Development and Transportation Committee.
6. If necessary, revise materials for submission to the Planning Commission.
7. Hold at least one public hearing in front of the Planning Commission, which then provides a recommendation.
8. Finally, receive approval or rejection from the relevant local legislative body (generally the Metro Council).¹²

Neighborhood meetings and public hearings are opportunities for residents to engage directly in decisionmaking and express their views about whether a proposed development aligns with the comprehensive plan's goals for future development in the city—a requirement for rezoning approval. Rezoning incur fees of \$1,000 or more. During the rezoning process, developers may agree to concessions or promises for changes they believe will improve their projects' chances of success. Louisville has a “plan certain” regulation, allowed under Kentucky law, that provides a binding mechanism for projects to fulfill those changes as part of a rezoning (Louisville and Jefferson County Planning Commission 1980). As part of the approvals process, the Planning Commission or relevant local legislature identify which binding elements must be included as part of a rezoning.

In many cases, rezonings in Louisville are associated with requirements for conditional use permits. Conditional uses are authorized under Kentucky statute and require “proper integration into the community” to be approved.¹³ Many uses that require conditional permits in Louisville have implications for equitable access to housing (e.g., boarding houses, homeless shelters, and mobile home or modular home parks) or environmental justice (e.g., crematories, package liquor stores, and water treatment plants). Allowed uses depend on the district where an applicant is requesting a rezoning; the conditional uses theoretically are compatible with the underlying district's general use requirements, but raise flags related to issues such as traffic, density, noise, and pollution. Any developer seeking a conditional use permit must request approval from the BZA and pay an additional fee of up to \$1,000. See a noncomprehensive list of example uses requiring conditional permits in appendix A.

A rezoning application may also require a landowner to seek a dimensional variance or waiver.¹⁴ Dimensional variances allow departures from by-right zoning relating to structure height or width and the size of yards and open space; a waiver allows developers to ignore requirements altogether in cases where they cannot modify standard minimums through a variance and the changes are not expressly prohibited. In cases where they are bundled within a rezoning, Metro's Planning Commission approves variances and waivers (rather than the BZA). In any variance or waiver case, landowners must demonstrate that they face a particular hardship or practical difficulties and show why a proposed variance would “not adversely affect the public health, safety, or welfare”; “will not alter the essential character of the general vicinity”; will not “cause a hazard or nuisance to the public”; and “will not allow an unreasonable circumvention of the requirements of the zoning regulations” (Louisville Metro PDS 2022). They also must provide signed affidavits from adjoining landowners. Fees for variance applications cost \$100 to \$700, depending on the use.¹⁵

In 2011, the Metro PDS conducted a review of the use of variances and waivers that year. The study identified 131 variances, 18 of which were approved by the Planning Commission and 113 of which

were approved by the BZA (PDS 2012). Of the variances, 86 percent were related to minimum or maximum yard area or setbacks, and 10 percent were associated with wall or fence height. This report aims to provide additional information by focusing on rezonings; we also include a review of their geographic concentration and impacts on social and racial equity.

Methods

Existing scholarship provides some insight into the use and misuse of zoning in general. But additional research is needed to understand how rezonings are used, who they affect, and whether they undermine the goals of achieving more socially just land-use regulation. To aid in this pursuit, we investigate the use of developer-initiated parcel rezonings in detail, using Louisville as a case study. We also integrate information about whether projects incorporate variances and conditional uses. Our research centered on the following key questions:

- To what degree have rezonings been used in Louisville over the past decade?
- Are there associations between the locations of projects for which developers request rezonings and the demographics of the neighborhood surrounding the proposed project, such as household incomes, residents' educational attainment, and/or residents' races or ethnicities?
- Are there associations between the type of rezoning application (e.g., upzoning or downzoning), applicant (e.g., person or corporation), project location, number of public speakers for and against, and approval rates of rezoning applications?

Data Sources

Louisville PDS staff catalogued all rezoning cases brought before the agency between 2010 and 2020. For each case, planning staff identified when the case was filed; what the rezoning constituted in terms of change from one district to another; whether the rezoning included a conditional use permit (and if so, which type); whether the rezoning included a variance permit or a waiver; the owner of the property; who represented the case (e.g., a planner or an attorney); how many public speakers expressed approval or opposition to the project at the relevant Planning Commission hearing on the subject; the number of votes in favor or opposed to the project by members of the Planning Commission; whether the Planning Commission recommended support for the project; and whether the relevant local legislature approved the project.

For each rezoning case, we input the address information provided in the original dataset into the Urban Institute’s internal geocoder to identify the project’s latitude and longitude. The geocoder identified locations for all but one address, leaving us with a database of 592 individual rezonings in Louisville Metro. We classified each rezoning into a typology of zoning changes, based on a review of the LDC (table 1).

TABLE 1
Types of Developer-Initiated Zoning Changes in Louisville, 2010–2020

Zoning Change Classification	Subcategory	Number of Cases
Change in building size allowance	Commercial upzoning	45
	Residential upzoning	93
	Industrial upzoning	2
	Residential downzoning	3
Change in building use allowance	Residential to commercial or mixed-use	189
	Residential to industrial	15
	Commercial to industrial	16
	Commercial to residential	1
	Industrial to residential	2
	Industrial to commercial or mixed use	13
	Multiple zones to residential	10
	Multiple zones to commercial or mixed use	25
Planned development	—	47
	Other	37
Total	—	515

Source: Louisville Metro Office of Planning and Design Services.

Note: 77 zoning cases had no information about zoning changes.

Where relevant, we also identified the conditional uses that were called into play as an element of the rezonings. These conditional uses included:

- Boarding and lodging houses
- Blood collection centers
- Camping and recreational vehicle parking areas
- Daycare facilities with eight or more children
- Funeral homes
- Golf driving ranges and miniature golf courses
- Mini warehouses

- Nursing and retirement homes
- Outdoor alcohol sales
- Off-street parking areas
- Scrap metal processing facilities and junkyards
- Solid waste management facilities
- Sports arenas

We collected data from the US Census Bureau's American Community Survey at the block group level, using the 2016–20 five-year sample. For each block group, we identified shares of residents' race and ethnicity; means of transportation to work; education levels; poverty status; household incomes; employment status; tenure; and median rents. Finally, we collected permitting data for new commercial and residential developments between 2010 and 2019 from the Louisville Open GeoSpatial Data site.¹⁶

Methodological Approach

We loaded the database of rezoning cases and the block group data into a geospatial analysis program. We then intersected the two, which allowed us to determine the corresponding block group for each rezoning case. Finally, we exported the data for analysis in Stata. In Stata, we conducted a series of descriptive analyses on the combined dataset, seeking to answer each of the key questions noted above. We conducted both tabular analysis and multivariate regressions on the data. Because of the relatively small dataset and the lack of experimental or even pseudo-experimental conditions, we do not seek to ascribe causal relationships to the connections between the variables we studied.

Limitations

Communities across the country allow landowners to diverge from baseline zoning through a variety of measures, including rezonings, and insights from Louisville could help inform our understanding about their purpose and use. But a case study of this community can only tell us so much about conditions in other parts of the nation. It is possible that Louisville's experience is outside the norm in one or more ways. Importantly, the fact that Louisville is currently conducting an equity review of its zoning code indicates a willingness among policymakers there to engage on this subject. This may not be the case among those making land-use decisions elsewhere.

Our work in Louisville is also limited because it is based on a quantitative review of rezoning cases. We were not able to study the full breadth of variances, waivers, or conditional uses, as we do not have a complete database of their use (we briefly discuss conditional use permits and variances included with rezoning applications but do not explore them in detail). Moreover, we could not provide insight into the mechanisms behind other important processes related to rezoning, including the degree to which the comprehensive plan aligned with rezoning approvals or influenced decisions, or the equity outcomes from approval processes such as planned unit developments or design review. As such, our conclusions represent a perspective on just one of the many ways developers can diverge from baseline zoning and only highlight the quantitative patterns of these aberrations in Louisville.

Findings: Louisville's Use of Rezoning

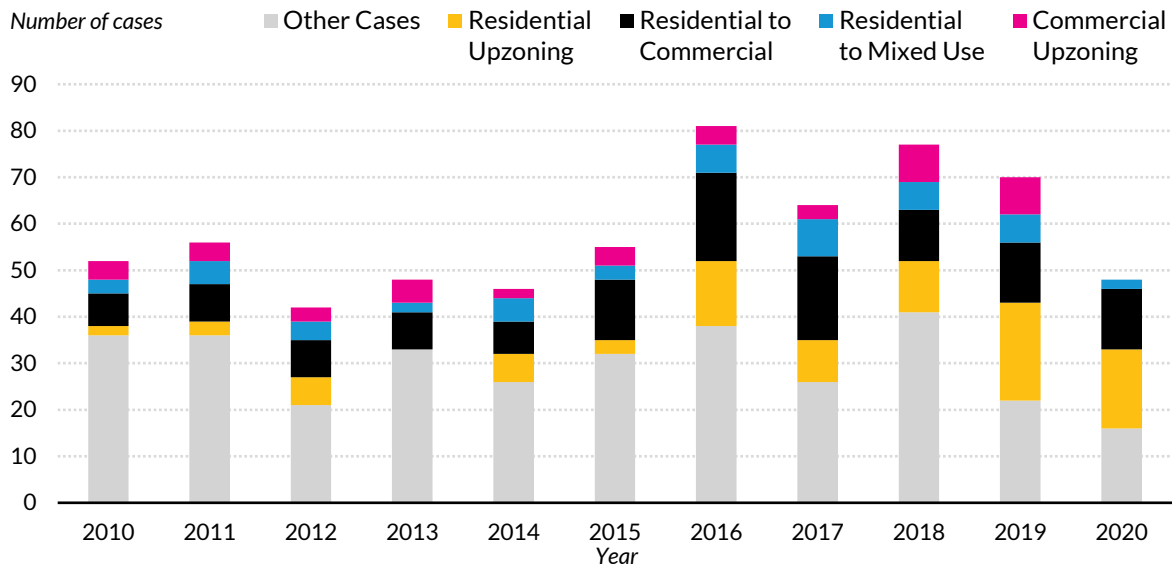
In this section, we explore the use of rezonings in Louisville over the past decade, comparing their frequency and distribution with those of building permits for new construction. We find that residential upzonings have become more common. Rezoning applications generally concentrate in similar geographical patterns as building permits overall, with developers applying more frequently in neighborhoods with a higher share of non-Hispanic white residents, higher household incomes, and lower population densities. We find that although most rezoning applications were approved, those in wealthier, whiter neighborhoods were much more likely to be rejected. We also find that the presence of speakers—specifically opposing speakers—is significantly associated with the Planning Commission and other local legislative bodies' decisionmaking.

Rezoning Over Time in Louisville

Our database includes 592 developer-initiated rezonings between 2010 and 2020. These rezonings were mostly associated with plans for new buildings on a particular parcel. For comparison, between 2010 and 2019, we counted 7,302 building permits in Louisville's registry; of these, 1,283 were for new single-family homes, 77 for new multifamily residential buildings, 236 for new commercial structures, and 7 for new industrial buildings. The average year in the dataset thus had a ratio of almost three new building permits for every rezoning case. Although these figures do not line up exactly in time (a project would have a rezoning issued before a building permit), they indicate that developers request rezonings for new projects at a relatively high rate.

The number of annual rezoning applications increased up until 2016 but has declined in most years since. Developers submitted an average of 56 rezoning applications annually between 2010 and 2020, with a low of 39 in 2012 and a high of 77 in 2016. The predominant types of rezoning applications varied over time as well (figure 3).

FIGURE 3
Rezoning Application Volume by Rezoning Type and Year



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Source: Authors' analysis of Louisville public land-use case records.

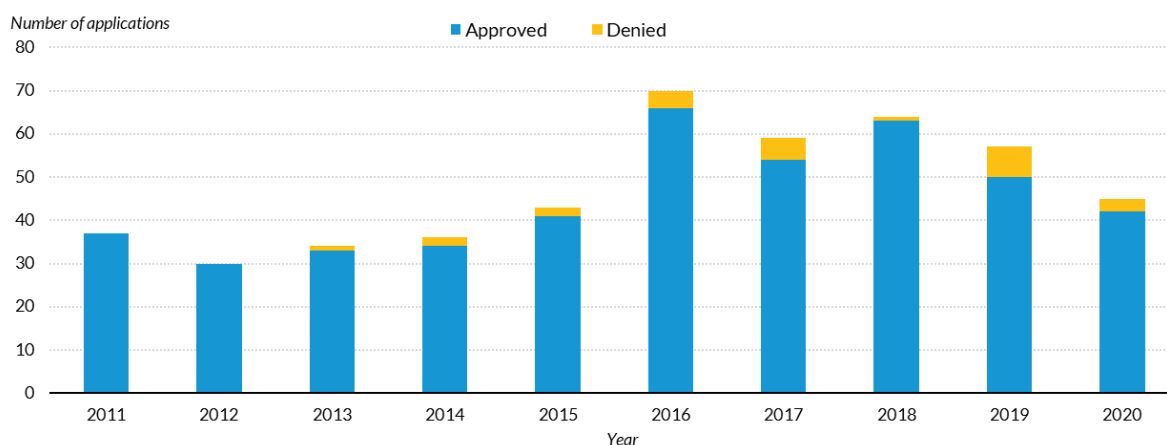
Note: All rezoning types with fewer than 45 total cases were bundled into the "Other Cases" category. Other cases include: changes of baseline zoning district from planned development to mixed use, commercial to enterprise, commercial to manufacturing, commercial to residential, enterprise to commercial, enterprise to manufacturing, manufacturing to commercial, manufacturing to enterprise, manufacturing to mixed use, manufacturing to residential, mixed use to commercial, mixed use to manufacturing, planned development to commercial, planned development to mixed use, residential to enterprise, residential to manufacturing, multiple zoning districts to commercial, multiple zoning districts to enterprise, multiple zoning districts to manufacturing, multiple zoning districts to mixed use, multiple zoning districts to residential, and residential to multiple zoning districts; upzoning of industrial or manufacturing; and downzoning of residential zone.

Over the years, developers have most frequently applied for approval to rezone residential properties for commercial uses. This suggests demand from developers to provide commercial uses in residential neighborhoods, or at least an abundance of land zoned for residential-only use (as noted, 73 percent of Louisville land is zoned exclusively for single-family residences). Figure 3 also shows a pattern of increasing residential upzoning applications—changing a parcel's zoning district to one with larger allowed construction—from 2016 onward, with a large increase in 2019 and 2020. Mixed-use development emerged as a more prominent rezoning application type between 2016 and 2019.

Approval rates for rezoning cases have, on average, slightly declined over time, suggesting that Louisville's legislative bodies (including the Metro Council and the 12 elected councils of suburban municipalities) have become somewhat less accepting of aberrations from the baseline code, even as overall applications have increased (figure 4). Between 2010 and 2020, denial rates averaged 5 percent. During the first half of the decade (2010–15), denial rates averaged 3 percent; in the latter half (2016–

20), they grew to 7 percent. The number of cases almost doubled, however, when comparing the first half of the decade to the latter half, from an average annual total of 37 rezoning applications considered to 59 average annual cases. This increase in rezoning applications, combined with a decline in approval rates, may reflect a boost in development pressure to build beyond baseline zoning parameters—but it also potentially suggests more reluctance on the part of legislative bodies to allow dramatic departures from the code. The latter may especially be the case as the highest number of rejections occurred in 2019, when the city's most recent comprehensive plan went into effect.

FIGURE 4
Rezoning Application Approval Rates over Time



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Source: Authors' analysis of Louisville public land-use case records.

Note: This figure shows the application approvals and rejections made by local legislative bodies, including the Metro Council and municipal councils of 12 suburban cities.

Geographic Patterns in Rezoning Applications

This section explores patterns of rezoning applications, development pressures, and neighborhood characteristics, including resident racial and ethnic demographics, rent levels, and incomes.

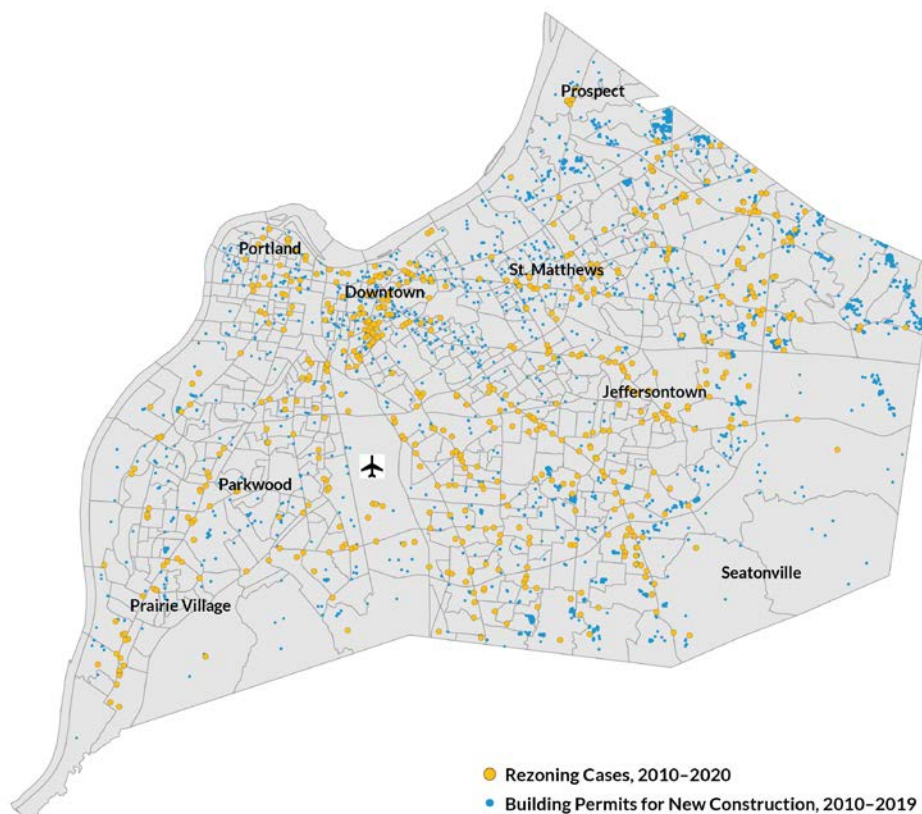
Understanding rezoning applications' use requires exploring whether rezonings follow or are independent of building permit patterns; whether there are significant associations between rezoning applications and neighborhood characteristics; and whether these three elements interact. This section also explores patterns in the types of rezoning applications considered—such as applications for conditional use permits in association with rezoning applications—by neighborhood characteristics. We find that both permits and rezonings are concentrated in neighborhoods with a higher share of residents who are white, highly educated, and have high incomes. We also show that they are more

likely to occur in lower-density neighborhoods. We identify no patterns of disproportionate applications for conditional use permits in neighborhoods by resident income or race and ethnicity, though these data are limited to projects also seeking a rezoning.

Rezoning Applications and Building Permit Rates by Neighborhood Characteristics

The number of building permits issued for new residential, commercial, or industrial construction across Louisville increased substantially over the past decade, peaking at 771 in 2018 but averaging 174 per year between 2010 and 2019. These building permits were distributed across the Metro, as were rezoning applications (figure 5).

FIGURE 5
Distribution of Building Permits and Rezoning Applications, 2010–2020



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Source: Authors' mapping of building permits and rezoning applications; information provided by the Louisville Metro Office of Planning and Design Services.

Note: Building permit data include only permits that were issued, permits for new construction, and permits granted between 2010 and 2019. Building permit data for 2020 were not available.

We compared the locations of building permits and rezoning applications with neighborhood demographics, using data at the block group level to capture detailed characteristics of the surrounding area. All in all, the Metro has 646 block groups, 412 of which had at least one new construction building permit and 285 of which had at least one rezoning case during the study period. On average, each block group averaged 0.82 rezonings and 5.5 building permits per year.

Table 2 compares neighborhood demographics with the locations of projects that received building permits or had rezoning applications. It documents the frequency of each within the top and bottom quintiles of several community characteristics, showing that both building permits and rezonings were statistically significantly more common in neighborhoods with larger shares of residents who were non-Hispanic white, held at least a bachelor's degree, had incomes above the federal poverty line, and were employed. On average, building permits and rezonings were also more frequent in neighborhoods with higher household incomes, higher rents, and lower population densities. Table 2 shows, for example, that Louisville block groups with median household incomes in the top 20 percent of the distribution across the county had 15.85 building permits and 0.78 rezoning applications annually—compared with 2.02 and 0.71, respectively, in the block groups with median household incomes in the bottom 20 percent of the distribution.¹⁷

TABLE 2

Neighborhood Characteristics Compared with the Number of Building Permits and Rezoning Cases

Annual average number of building permits or rezoning applications in neighborhoods at the top or bottom 20 percent of the distribution across a block group's characteristics

	Top 20 Percent	Bottom 20 Percent	P-value of Difference
New housing building permits			
Share of population that is non-Hispanic white	7.31	1.98	***
Share of adults 25 and older with a bachelor's degree or higher	11.93	1.78	***
Share of residents in poverty	1.83	13.10	***
Median household income	15.85	2.02	***
Share of workers unemployed	3.13	6.79	***
Median gross rent	8.74	2.70	***
Population density per square mile	1.50	15.33	***
Rezoning applications			
Share of population that is non-Hispanic white	0.90	0.59	***
Share of adults 25 and older with a bachelor's degree or higher	0.71	0.67	***
Share of residents in poverty	0.66	0.68	***
Median household income	0.78	0.71	***
Share of workers unemployed	0.72	0.94	***
Median gross rent	1.05	0.90	***
Population density per square mile	0.57	1.61	***

Source: Authors' analysis of Louisville rezoning and permit data from 2010 to 2020; 2016–20 American Community Survey data at the block group level.

Note: *** $p < 0.01$ in t -tests of means comparing the permit and rezoning distribution in the top versus bottom 20 percent of each analysis category. An example reading of the table: the block groups within top quintile for share of non-Hispanic white inhabitants had an average of 7.31 building permits per year between 2010 and 2020, compared with 1.98 building permits per year in the block groups within the lowest quintile for share of white inhabitants.

We then conducted a series of multivariate regressions to compare the relative associations between neighborhood characteristics and the frequency of building permits and rezonings at the block group level. We only included a subset of the variables we collected in these regressions because of high correlations between some variables and the potential multicollinearity that could result. There are close associations, for example, between the block group share of non-Hispanic white residents and share of the neighborhood population with a bachelor's degree or higher; share of resident incomes below the federal poverty line; and resident median household income.

We present the results of several such regression models in table 3. We conducted the models for each block group over the overall period (models I, III, and V), as well as for each block group for each year (models II, IV, and VI). Conducting regressions both over the full period and for each year allowed

us to test the robustness of our results. For the former group, regression dependent variables are the total number of permits or rezonings over the 2010–2020 period. For interpretation, a 10 percentage-point higher share of non-Hispanic white residents in 2016–2020 in a block group is associated with 0.04 additional rezonings in that neighborhood over the study period (model III). For the latter group of regressions, outputs are the number of permits or rezonings per year over the 2010–2020 period. A 10 percent higher population density level, for example, is associated with 3.5 percent fewer permits per year in a block group (model II). These regression models allow us to further disaggregate the associations between individual neighborhood characteristics. We present results for a series of alternative regressions—showing results that include median household income but not race and ethnicity—in appendix B.

TABLE 3

Regressions of Block Group Building Permit and Rezoning Applications from 2010–2020, by Neighborhood Characteristics

	I	II	III	IV	V	VI
	Total Permits per Block Group	Annual Permits per Block Group	Total Rezoning per Block Group	Annual Rezoning per Block Group	Total Rezoning per Block Group	Annual Rezoning per Block Group
Building permits	N/A	N/A	N/A	N/A	0.02** (0.01)	0.00 (0.00)
Share of population that is non-Hispanic white	3.19 (2.18)	0.31*** (0.09)	0.38** (0.19)	0.03 ** (0.01)	0.32* (0.18)	0.03** (0.01)
Share of workers who are unemployed	13.06 (12.61)	1.23** (0.58)	0.87 (1.13)	0.08 (0.08)	0.60 (1.06)	0.07 (0.08)
Rent (log)	5.05*** (1.76)	0.51*** (0.14)	0.07 (0.17)	0.01 (0.01)	-0.03 (0.17)	0.00 (0.01)
Population density (log)	-3.30*** (0.70)	-0.35*** (0.08)	-0.55*** (0.11)	-0.05*** (0.01)	-0.48*** (0.11)	-0.05*** (0.01)
Intercept	-5.69 (13.28)	-5.62*** (1.00)	4.58*** (1.48)	-0.31*** (0.08)	4.70*** (1.50)	-0.30*** (0.08)
n	487	5,357	487	5,357	487	5,357
Adjusted R ²	0.08	0.03	0.13	0.02	0.17	0.02

Sources: Authors' analysis of Louisville rezoning and permit data; 2016–20 American Community Survey data at the block group level.

Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$. Robust standard errors are in parentheses. Total permits and rezonings sum the total number of each in every block group over the 2010–20 period (though there were no permit data for 2020). Note that for annual permit analysis, we assume building permit levels in 2020 matched those in 2019. Rezonings include both those that are approved and denied. Note that the census data are not adjusted by year; however, Louisville block group demographic data in 2010 were highly correlated with data for 2016–20, so we assumed steady demographics by neighborhood.

Several conclusions stand out in table 3. Across all models, population density is negatively associated with permitting and rezoning; this is illustrated in figure 5, which shows significant development occurring in neighborhoods at the edge of the Metro. Higher rents—and thus higher financial returns—are associated with more building permits but not a higher number of rezonings. And evidence is mixed on the impact of neighborhood race and ethnicity on development; a higher share of non-Hispanic white residents in a block group is associated with increased rezonings and potentially more permits (model II shows significance, but model I does not).

In models V and VI, we controlled for the number of building permits in a neighborhood in order to account for the possibility that rezonings simply occur in areas with the most development. Here, we again find strong evidence that population density is negatively associated with rezonings. Additionally,

we show that the share of non-Hispanic white residents in 2016–20 is positively associated with total rezonings from 2010 to 2020 (though at a lower significance level in model V). This indicates that base zoning rules may be less likely to match development demand in whiter neighborhoods.

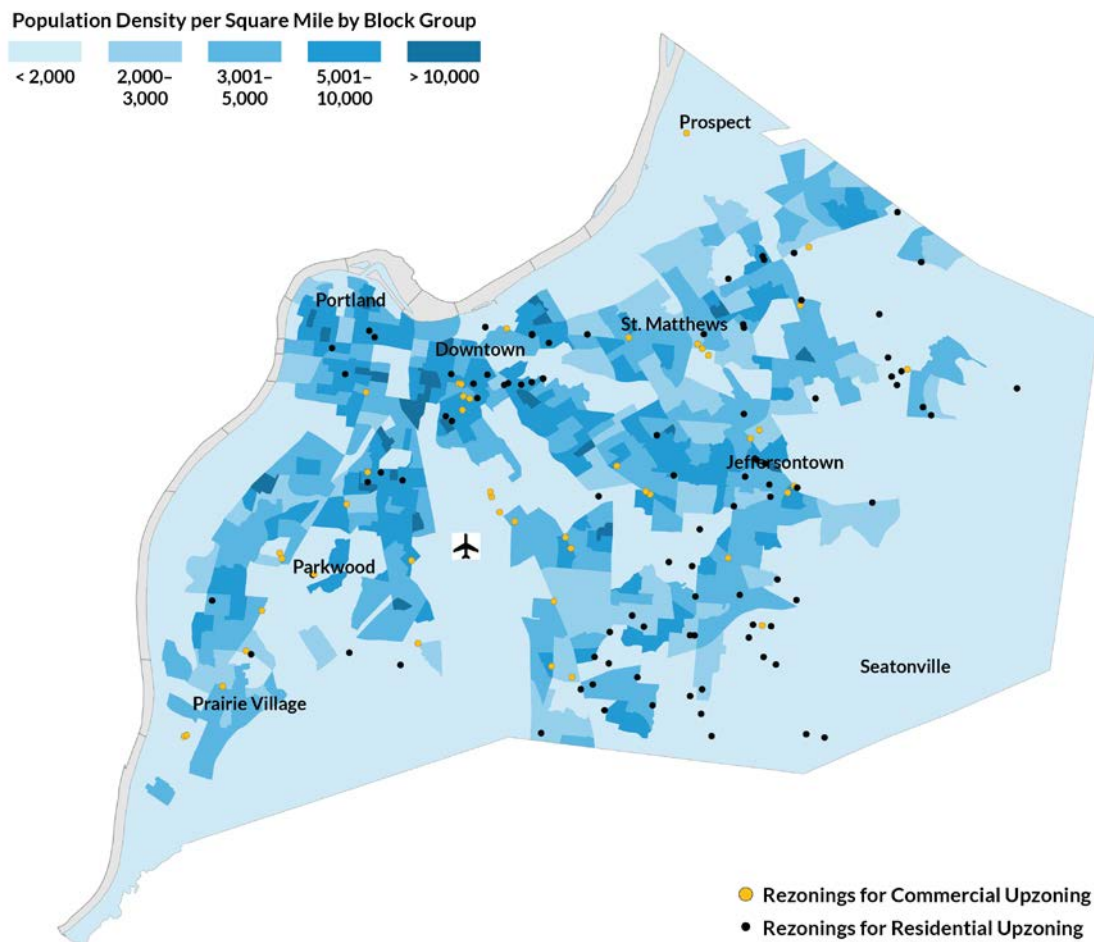
In appendix B, we find that higher median household income is positively associated with additional permits, indicating that development demand follows increased resident wealth. That said, higher incomes are associated with fewer rezonings, including when controlling for level of development with building permit data. This suggests that developers may be more hesitant to request rezonings in such communities. We provide further evidence linking neighborhood incomes with rezoning rates below.

Rezoning Application Types by Neighborhood Characteristics

In figure 6, we illustrate the pattern of rezonings for commercial and residential upzonings—projects for which developers requested the right to build bigger than allowed by their underlying base zoning—compared with population density in neighborhoods throughout Louisville. These rezonings were somewhat scattered, with some projects located in very lightly populated areas, such as in the far southern portions of the Metro, and others located downtown. In many cases, projects seeking applications for upzonings were located on the edge of relatively more densely populated areas, suggesting an interest from developers in building on the outskirts of existing communities; this reaffirms our findings in table 3, which show more permits and rezonings in more sparsely populated communities.

FIGURE 6

Rezoning Applications for Commercial and Residential Upzones, by Block Group Population Density



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Source: Authors' analysis of Louisville rezoning dataset and 2016–20 American Community Survey data.

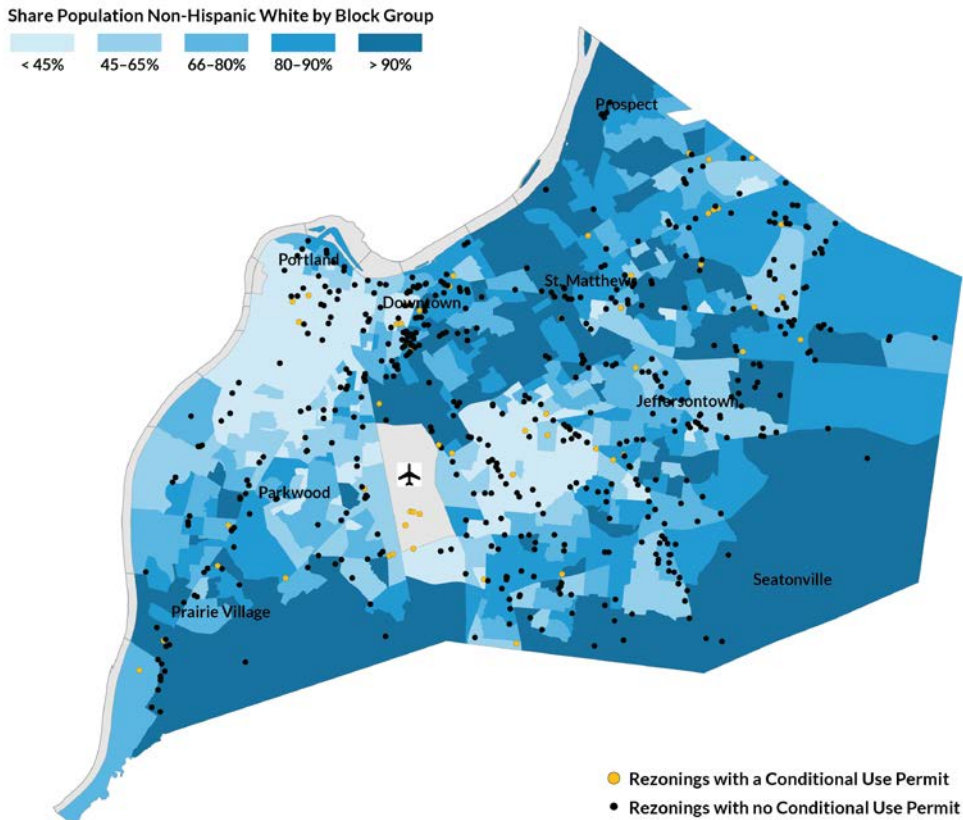
The average population density for block groups with no rezonings at all over the study period was 4,866 people per square mile, compared with an average of 4,068 people per square mile for neighborhoods with one rezoning and 3,317 people per square mile for neighborhoods with two or more rezonings. A *t*-test of means shows that the differences between these population density levels are statistically significant. Rezoning specifically involving a commercial upzoning occurred in neighborhoods with an average of 3,599 people per square mile; those involving a residential upzoning occurred in neighborhoods with an average of 3,558 people per square mile; and when examining all rezonings, neighborhoods had an average of 3,150 people per square mile for the surrounding

neighborhood. We therefore find that upzonings occur more regularly in somewhat denser communities than rezonings do overall.

In figure 7, we map all rezoning applications by whether they also incorporated a conditional use permit (such as for a use that might be considered noxious). The map also indicates the share of the non-Hispanic white population for each block group. On average, rezonings that included conditional use permits occurred in neighborhoods that were 67.3 percent non-Hispanic white, while rezonings without such permits occurred in neighborhoods that were, on average, 71 percent non-Hispanic white. This difference was not statistically significant. Moreover, there was no statistically significant difference in median household incomes or education levels for the neighborhoods where rezonings with or without conditional use rezonings occurred.

FIGURE 7

Rezoning Applications with or without Conditional Use Permits, by Block Group
Share of the Population that Is Non-Hispanic White



URBAN INSTITUTE

Source: Authors' analysis of Louisville rezoning dataset and 2016–20 American Community Survey data.

These findings suggest no clear relationship between the racial characteristics of a neighborhood and the likelihood that a developer requests a rezoning that includes a conditional use permit. Indeed, when we compared the characteristics of neighborhoods with conditional use permits for the potentially most noxious uses—such as junkyards, outdoor alcohol sales, scrap metal processing, and solid waste management—we found that they actually had a larger share of white residents than neighborhoods where developers had not requested such conditional use permits. This difference, however, was not statistically significant; we caution that our analysis does not account for the full group of conditional use permits, since we only analyzed those attached to rezonings.

Patterns in Rezoning Applications and Approval Rates

We also assessed the nexus of rezoning case characteristics, their approval rates, and the characteristics of the neighborhoods in which landowners submitted rezoning applications. Although we find that local legislatures do not appear to have ruled for or against rezonings directly based on neighborhood characteristics, we do find that their rulings are heavily associated with the levels and tenor of participation at public hearings. And that participation, in turn, is likely influenced by the demographics of the neighborhoods where developers propose projects.

Rezoning Cases Vary by Representation and Participation

Landowners submitted rezoning applications to the Planning Commission under various circumstances. Table 4 summarizes the key characteristics of rezoning cases, describing how they were examined and the neighborhoods in which they were considered, organized by the recommendation of the commission. Overall, the commission recommended 84 percent of 592 cases for approval by the relevant local legislative body; 3 percent were not recommended; and for the remaining 13 percent, the commission either took no action or the case remained pending at the time of data download.

TABLE 4

Descriptive Statistics on Rezoning Case Hearings, by Recommendation of the Planning Commission

	Recommended for Approval	Not Recommended for Approval	No Action	Pending	Total
Ownership					
<i>Individual owner</i>	219	12	0	0	231
<i>Corporate or LLC owner</i>	280	5	0	1	286
Representation (for cases with a determination) *					
<i>Planner</i>	118	4	0	1	123
<i>Individual or owner</i>	57	4	0	0	61
<i>Attorney</i>	323	9	0	0	332
Speakers at Planning Commission hearing					
<i>Cases with speakers</i>	494	17	0	0	511
<i>Cases with opponents</i>	146	17	0	0	163
<i>Cases with proponents</i>	493	17	1	0	511
<i>Total speakers (average)</i>	4.05 (max: 99)	13.53 (max: 43)	1 ^b (max: 2)	0	517 ^a
<i>Speakers in favor (average)</i>	2.74 (max: 40)	4.94 (max: 16)	1 (max: 2)	0	517
<i>Speakers opposed (average)</i>	1.31 (max: 59)	8.59 (max: 30)	0	0	517
<i>Share in favor (average)</i>	87%	39%	100%	N/A	511
Average neighborhood characteristics of encompassing census tract					
<i>Median household income</i>	\$ 61,574	\$ 67,095	\$67,881	N/A	\$63,083
<i>Share of workers who are unemployed</i>	6%	4%	5%	N/A	6%
<i>Share of adults 25 and older with a bachelor's degree or higher</i>	33%	44%	34%	N/A	34%
<i>Share of households in owner-occupied homes</i>	59%	68%	62%	N/A	59%
<i>Share of population that is non-Hispanic white</i>	70%	79%	71%	N/A	71%
<i>Share of population that is non-Hispanic Black</i>	18%	8%	16%	N/A	17%
<i>Share of population that is Hispanic</i>	6%	9%	6%	N/A	6%
Rezoning type					
<i>Residential upzoning cases</i>	82	8	2	0	92
<i>Residential to commercial rezones</i>	112	8	4	1	125
<i>Residential to mixed-use rezones</i>	48	1	1	0	50
<i>Any residential rezone (binary)</i>	294	17	8	1	320
<i>Any commercial rezone (binary)</i>	59	0	3	0	62
<i>Any PUD rezone (binary)</i>	24	0	0	0	24
<i>Any IEM rezone (binary)</i>	45	0	1	0	46
<i>Any upzoning cases (binary)</i>	128	8	4	0	140
<i>Any waiver required (binary)</i>	211	7	0	0	218
<i>Any variance required (binary)</i>	171	10	0	0	181
<i>Any CUP required (binary)</i>	55	0	1	0	56

Source: Authors' analysis of Louisville rezoning data.

Notes: All shares and averages for speakers are for cases where there was at least one speaker. There were six cases the Planning Commission reviewed that had zero speakers. Only two no-action cases had any recorded speakers, one with zero and the other with two in favor. Residential rezonings include residential upzonings or downzonings; residential to commercial, manufacturing, enterprise, or mixed-use rezonings; multiple changes within a residential zone; and planned developments in residential zones. Commercial rezonings include commercial upzonings; commercial to residential, manufacturing, or enterprise rezonings; multiple changes within a commercial zone; and planned commercial developments. IEM = industrial, enterprise, or manufacturing; CUP = conditional use permit.

* One case had missing data for representation, so this section totals 516 instead of the 517 total cases.

Most cases (54 percent) that we evaluated pertained to properties that were originally zoned for residential use, followed by commercial use (10 percent); fewer cases related to planned developments or land originally zoned for manufacturing, industrial, or enterprise uses or for planned developments. Among the landowners submitting rezoning applications, roughly half were businesses or LLCs; most of these were development corporations or banks, but a handful were smaller businesses operating uses such as car washes, storage facilities, or grocery stores. The remaining properties owned by individuals were largely held by trusts. Individuals were more likely to apply for residential rezonings than any other type of rezoning (72 percent), and more individuals applied for residential rezonings than did LLC owners (167 versus 145). Residential rezonings were more likely in higher-income areas: neighborhoods with residential rezoning applications had median household incomes of \$67,000, while other rezoning application types occurred in areas with median incomes of \$57,000 (a statistically significant difference, $p < 0.001$).

Most landowners chose to hire attorneys (64 percent) or planners (24 percent) to represent them in front of the Planning Commission. Only a small share (12 percent) represented themselves. Individual owners relied on attorneys to represent their cases at lower rates than did corporate or LLC owners (60 versus 67 percent, respectively). The Planning Commission recommended only 17 cases for rejection by the relevant local legislature (though the commission's recommendations are nonbinding). As such, we do not want to overinterpret these findings, especially since we delve into details about binding legislative decisions below. Nonetheless, we find that the commission recommended rejection or no action for individual-owned projects at a higher rate than for cases submitted by LLCs or other corporations. Given that individuals were less likely to rely on attorneys, this indicates that individual applicants without legal representation may be unprepared for the full application process—and that community members without legal representation may not be on an even playing field.

The commission's recommendations varied somewhat by several neighborhood demographics. Applications that were disapproved were, on average, located in neighborhoods with higher household incomes, lower unemployment rates, higher educational attainment, and a higher share of owners and white residents (see appendix C for a table of *t*-tests with these means).

Planning Commission approval rates did differ quite dramatically when we compared them with speaker attendance at commission hearings. Overall, the cases that the commission approved had far fewer speakers attend hearings on average than for cases the commission disapproved (4.1 versus 12.8, $p < 0.001$), and a much larger share of those speakers expressed their support for proposals (87 versus 39 percent, on average). This raises important questions: if the commission's recommendations were so

highly associated with speakers at its meetings, to what degree were the decisions of local legislatures associated with those speakers' views?

As we noted in the introduction, other scholars have found that public participation plays an important role in influencing the likelihood of project approval. Public officials are responsive to their constituents, especially those who have the means to show up to hearings and make their opinions heard. But this does not mean that the public always shows up. Some of the rezoning cases we examined featured no external speakers at all at the relevant Planning Commission meeting (6 cases out of 517). On average, however, each case attracted 3.79 speakers to the commission hearings, with one case attracting 99. Of the 511 cases with speakers, 68 percent had only project proponents; only one case had only opponents, and 32 percent had a mix of proponents and opponents.

We compare the presence of speakers at commission hearings with neighborhood characteristics and case type in table 5, which presents the results of several multivariate regressions. We find that the total number of speakers did not vary significantly by whether the applicant was an LLC or corporate owner; whether the project's original zone was residential; or whether the case required a conditional use permit. These factors also did not influence whether opponents were present or the share of speakers in favor of the rezoning request. (Separately, we also found no impact of the application's type of representation on commission recommendation outcomes.)

TABLE 5

Regressions of Case and Neighborhood Characteristics on Public Participation Indicators

	Dependent Variable					
	Number of Total Speakers		Were Opponents Present?		Share of Speakers in Favor	
Neighborhood median household income (log)	2.53**	N/A	0.21***	N/A	-0.11***	N/A
Share of neighborhood residents non-Hispanic white	N/A	2.99***	N/A	0.26***	N/A	-0.15***
Corporate or LLC owner	1.05	0.83	-0.02	-0.04	0.02	0.03
Residential to commercial rezone	0.49	0.54	-0.00	0.02	-0.01	-0.02
Residential to mixed use rezone	-0.34	-0.31	-0.09	-0.08	0.04	0.04
Upzoning	2.19*	2.22*	0.09	0.09	-0.05	-0.05*
CUP required	1.12	1.27	-0.01	0.01	0.03	0.02
Variance required	2.24*	2.30***	0.06	0.08	-0.05*	-0.06*
Constant	-25.41**	0.18	-1.99***	0.10	2.01***	0.97***
Observations	485	513	483	511	477	506
R-squared	0.056	0.039	0.045	0.022	0.050	0.034

Source: Authors' analysis of Louisville rezoning dataset.

Notes: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. We do not examine neighborhood household income and the share of residents who are white in the same regressions because the two are closely correlated. CUP = conditional use permit.

The total number of speakers at the Planning Commission, however, rose significantly in parallel with increasing household incomes and increased share of non-Hispanic white residents in the neighborhood where the case was presented. These neighborhood characteristics were also positively associated with the likelihood that opponents spoke at the relevant hearing. Meanwhile, the share of speakers in favor declined in parallel with increased neighborhood incomes and non-Hispanic white population shares. Table 5 shows that for every 10 percent higher neighborhood median household income, the total number of speakers discussing a rezoning case rose by 0.25 people ($p < 0.01$). Similarly, a 10 percent higher neighborhood median household income was associated with a 2 percentage-point higher probability of an opponent being present and 1 percentage point lower share of speakers in favor of a project. Understood another way, comparing a neighborhood in the 50th percentile of median household income with one in the 90th percentile—a difference of \$36,000, or 61 percent—would be equivalent to a 13 percent greater likelihood of opponents showing up and 7 percent lower share of speakers in favor.

Indeed, the 163 cases for which any opponents spoke were more likely to be for projects in neighborhoods with significantly higher incomes; these neighborhoods had median household incomes of \$71,358. The 354 cases without opponents had neighborhood median household incomes of only \$57,423 ($p < 0.001$). These results support previous research showing that wealthier residents have greater capacity to “defend” their neighborhoods by attending public hearings (Einstein, Palmer, and Glick 2019; Gabby 2018; Zhao 2011).

We arrived at similar findings regarding the racial composition of neighborhoods where rezonings were considered, also shown in table 5 (neighborhood incomes and race are closely correlated in Louisville). A higher share of non-Hispanic white residents in a neighborhood, on average, was associated with more public speakers at rezoning hearings, a higher likelihood of opponents being present, and a smaller share of public speakers in favor of the proposed project.

We found some evidence of impacts related to whether a rezoning incorporated a variance filing and a conditional use permit. Having a variance attached to a rezoning was associated with an additional two speakers at the average commission meeting on the matter and, in some cases, a lower share of speakers in favor—both after controlling for neighborhood characteristics. Finally, we found that upzoning cases attracted more speakers on average and a smaller share of speakers in favor, also after controlling for neighborhood characteristics.

Rezoning Case Approval Rates by Case and Neighborhood Characteristics

As noted, rezoning applicants must submit their proposals to the Land Development and Transportation Committee, which affirms that the applicants' materials are complete. Applicants then present plans at a Planning Commission hearing, which includes an opportunity for public feedback and concludes with the commission's vote on a recommendation. At that point, the commission forwards the application materials to the relevant local legislature for approval or denial.¹⁸ As noted in table 4, the commission recommended the vast majority of presented cases for approval, and legislatures went on to approve them. But local legislatures did not always follow the commission's advice (table 6). The legislatures denied approval of 26 rezonings (4 percent); of these, the commission had recommended 12 for approval. And legislatures approved 490 cases (83 percent), 3 of which were rezoning cases the commission had not recommended.

TABLE 6

Rezoning Case Counts by Planning Commission Recommendation and Legislative Approval

	Approved/ Recommended	Denied/Did not Recommend	No Action	Pending	Total
Local legislatures (e.g., Metro Council)	491 (83%)	25 (4%)	76 (13%)	1 (0%)	593
Planning Commission	499 (84%)	17 (3%)	76 (13%)	1 (0%)	593
Of cases the Planning Commission recommended...					
Metro Council	487	12	0	0	499
Of cases local legislatures approved...					
Planning Commission	487	3	0	0	490
Of cases the Planning Commission did not recommend					
Local legislatures	3	14	0	0	17
Of cases local legislatures rejected...					
Planning Commission	11	14	0	0	25

Source: Authors' analysis of Louisville rezoning case data.

We then examined legislative approval rates for rezoning applications based on several case characteristics (table 7, which is similar to table 4, describing the Planning Commission's actions). Of all cases considered, legislatures were roughly equally likely to approve cases related to projects from individuals and corporations or LLCs. Projects that were represented by planners or attorneys, however, were somewhat more likely to be approved than those with individual representation (95 and 96 percent versus 88 percent, respectively). Rezoning cases that legislatures approved, compared with those they denied, were located in neighborhoods with lower household incomes; a higher share of residents who are unemployed or Black; and a lower share of people with higher education levels, households who are renters, and people who are non-Hispanic white.

TABLE 7

Descriptive Statistics on Rezoning Case Hearings by Legislative Action

	Approved	Denied	No Action	Pending	Total
Ownership					
Individual owner	217	14	NA	0	231
Corporate or LLC owner	274	11	NA	1	286
Representation*					
Planner	117	5	0	1	123
Individual or owner	54	7	0	0	61
Attorney	319	13	0	0	332
Speakers					
Cases with speakers	486	25	1	0	512
Cases with opponents	142	21	0	0	163
Cases with proponents	486	24	1	0	511
Total speakers (average)	4.04 (max: 99)	10.72 (max: 48)	1 ^b (max: 2)	0	4.36 ^a
Speakers in favor (average)	2.75 (max: 40)	4.12 (max: 16)	2 (max: 2)	0	2.81
Speakers opposed (average)	1.30 (max: 59)	6.6 (max: 36)	0	0	1.55
Share in favor (average)	87%	49%	100%	NA	85%
Average neighborhood characteristics of encompassing census tract					
Median household income	\$61,375	\$69,249	\$67,881	\$83,000	\$62,570
Share unemployed ^c	6%	3%	5%	2%	5%
Share with a bachelor's degree ^d	33%	41%	34%	57%	34%
Share owner-occupied homes ^e	58%	71%	62%	55%	59%
Share non-Hispanic white ^f	70%	75%	72%	97%	71%
Share non-Hispanic Black ^f	18%	11%	16%	0%	17%
Share Hispanic ^f	6%	8%	6%	2%	6%
Rezoning type					
Residential upzoning cases	83	7	2	0	92
Residential to commercial rezones	109	11	4	1	125
Residential to mixed-use rezones	46	3	1	0	50
Any residential rezones (binary)	290	21	8	1	320
Any commercial rezones (binary)	57	2	3	0	62
Planned development rezones (binary)	49	1	2	0	52
Any IEM rezones (binary)	46	0	1	0	47
Any upzones (binary)	128	8	4	0	140
Any variance required (binary)	170	11	0	0	181
Any waiver required (binary)	208	10	0	0	218
Any CUP required (binary)	54	1	1	0	56

Source: Authors' analysis of Louisville rezoning data

Notes: All shares and averages for speakers are for cases where there was at least one speaker unless otherwise noted. There were six cases with no speakers. The 76 "no action" cases (i.e., those that were dismissed or rescinded before the Planning Commission hearings) frequently did not have ownership or rezoning type data, so counts in these categories are incomplete. Residential rezonings include residential upzonings or downzonings; residential to commercial, manufacturing, enterprise, or mixed-use rezonings; multiple changes within a residential zone; or planned developments in residential zones. Commercial rezonings include commercial upzonings; commercial to residential, manufacturing, or enterprise rezonings; multiple changes within a commercial zone; and planned commercial developments. CUP = conditional use permits; IEM = industrial, enterprise, or manufacturing.

* One case was missing data on its representation, so this section totals 516 instead of 517.

a = There were 13 cases with no recorded speakers. b = Only two no-action cases had any recorded speakers, one with zero and the other with two in favor. c = of workers. d = of adults 25 years and older. e = of households. f = of population.

In appendix D, we further contextualize this information by comparing the distribution of approved rezonings, denied rezonings, and permits for new construction by their respective block group's median household income. Figure D.1 shows that local legislatures were more likely to approve rezonings in lower-income communities, even though permitting was more frequent in higher-income neighborhoods. Figure D.2 provides additional detail on approved and denied rezoning applications. These data affirm that wealthier neighborhoods in Louisville have been more capable of preventing development that goes beyond what is allowed in baseline zoning.

On average, we found that hearings involving cases that the legislature approved had far fewer speakers than those for cases that were denied (4 versus 10.7, $p < 0.001$), and approved case hearings had a higher share of speakers in favor of the projects (87 percent speakers in favor in approved cases versus 49 percent in rejected cases, $p < 0.001$). In sum, these findings suggest that local legislatures pay close attention to the balance of speakers at commission hearings, but also that they may be less likely to approve rezonings in highly contentious cases with higher numbers of opponents present, even if speakers in favor have a majority.

Table 8 summarizes rezoning data by block group quartile, divided based on median household income. We find that neighborhoods with residents with higher median incomes had a higher share of applications in R4 (single-family) zones, had more public speakers show up to rezoning hearings, and had more of those speakers express their opposition to proposed projects. The table also demonstrates that rezonings in the lowest-income neighborhoods were more likely to be approved (98 percent, counting only those rezonings with a legislative action) than those in neighborhoods with higher-income residents (93 to 94 percent). As a result, although there were more rezoning applications in the highest-income neighborhoods than the lowest-income neighborhoods (122 versus 118), the local legislative body approved fewer total rezonings (115 versus 116) and fewer average rezonings per block group and neighborhood than for any other income quartile. Together, these trends paint a picture of residents of wealthy communities finding the means to oppose projects that would disrupt their physical environments. Overall, these neighborhoods hosted the least amount of development in the Metro region as a whole, despite their neighborhoods' amenities. Although the numerical difference in rezoning applications is small, it reflects the broader reality that, in the rare circumstances in which local legislatures oppose a rezoning, they are more likely to be in a higher-income neighborhood and for a project that had more public speakers state their opposition.

TABLE 8

Developer-Initiated Rezoning and Characteristics by Block Group Income Quartile, 2010–2020

	Median Household Income			
	1st Quartile (<\$41,944)	2nd Quartile (\$41,944– \$59,423)	3rd Quartile (\$59,424– \$75,775)	4th Quartile (>\$75,775)
Total applications	118	130	146	122
Average number of applications	1.66	1.83	2.06	1.72
Average share of applications in R4 zones	14%	27%	33%	48%
Total approved applications	116	123	136	115
Approval share	98%	93%	93%	94%
Average number of approved applications	1.63	1.73	1.92	1.62
Number of public speakers	3.57	3.72	4.48	6.93
Share of cases with opponents	20%	29%	38%	50%
Average share of speakers supporting	90%	85%	82%	75%

Source: Louisville Metro Office of Planning and Design Services.

Note: This table excludes applications with no legislative action. We divided quartiles based on block group median household income data from the 2020 Decennial Census.

These numbers come to life in the examination of two rezoning cases for projects that would have been just a five-minute drive from one other in the suburban community of Jeffersontown southeast of downtown Louisville but within the Metro. Both proposals would have been located adjacent to arterial thoroughfares but were situated in dramatically different neighborhoods in terms of their wealth (table 9). Silver Creek Place Apartments, a proposed 24-unit apartment building, would have been built in a densely populated area largely inhabited by people with low incomes and with a diversity of racial or ethnic backgrounds. The Jeffersontown City Council approved the residential upzoning project—from the R4 single-family district to R6—in 2016.

Three years later, a similar rezoning application for a 21-unit condo building, also located in an R4 single-family residential district, was not recommended by the Metro Planning Commission, and was subsequently denied approval by the Jeffersontown City Council. That project, the Smith Watterson Trail Condos, would have required a rezoning into a R5A district. But it was located in a wealthier, majority-white, and largely owner-occupied neighborhood. Staff reports compiled by the PDS for both cases show that planners found “the proposal generally [met] the guidelines of the Comprehensive Plan and requirements” of the city’s LDC. However, the cases’ public participation reflected the neighborhood demographics surrounding the applications. While the first proposal attracted no opponents, 21 opponents attended the hearing for the Smith Watterson Trail project. The first was in a largely low-income, diverse neighborhood, whereas the other was in a higher-income, largely white neighborhood.

TABLE 9

Case Study of Residential Upzoning Applications in Low-Income and High-Income Neighborhoods

	Silver Creek Place Apartments	Smith Watterson Trail Condos
Case number	16ZONE1073	19-ZONE-0016
Vote date	November 7, 2016	June 24, 2019
Original zone	R4	R4
Rezone request	R6	R5A
Proposed development number of units	24	21
Rezoning type	Residential upzone	Residential upzone
Representative	Land planner	Land planner
Number of speakers in favor	2	2
Number of speakers opposed	0	21
Total speakers	2	23
Planning Commission recommendation	Yes	No
Legislative body approval	Yes	No
Median household income	\$40,000	\$68,523
Median gross rent	\$942	\$1,139
Share of population non-Hispanic Black	14%	6%
Share of population non-Hispanic white	54%	74%
Share of population non-Hispanic Asian	10%	18%
Share of population Hispanic	11%	2%
Share of workers unemployed	6%	4%
Share of residents living under the federal poverty line	29%	1%
Share of homes renter-occupied	70%	4%
Share of adults 25 and older with a bachelor's degree or higher	30%	46%

Source: Authors' analysis of Louisville Metro Office of Planning and Design Services rezoning case data and public meeting records.

To further refine this evaluation, in table 10, we develop a series of regression models that estimate the relative influence of various rezoning case attributes to understand their potential influence on legislative approval rates. These results go beyond those presented in tables 7 and 8 by allowing us to control for different features simultaneously. In model I, we identify the degree to which certain demographic characteristics of the neighborhood surrounding the rezoning application parcel affected the legislature's choice.¹⁹ In model II, we test the influence of applicant representatives. Model III compares the relative influence of different types of rezoning cases. Model IV examines the relative influence of public speakers at Planning Commission hearings. In model V, we include information about the commission's recommendations—as well as the presence of additional conditional use permit and

variance applications included with cases—with variables from the other models to control for the relative influence of each.

TABLE 10
Local Legislative Approval Regression Models

	I Neighborhood Model	II Representation Model	III Rezone Type Model	IV Speakers Model	V Full Model
Share of the population that is non-Hispanic white	-0.03				0.02
Share of workers who are unemployed	0.24*				0.16
Planning Commission recommended					0.75***
CUP included					0.01
Variance included					0.01
Share of speakers in favor				0.27***	0.12*
Total speakers				-0.00	
Planner representative		0.07			
Lawyer representative		0.07			0.01
Residential rezoning			-0.05*		-0.01
Commercial rezoning			-0.01		-0.05
IEM rezoning			0.02		0.01
Upzoning			-0.00		0.04
Constant	0.95***	0.89***	0.98***	0.73***	0.10
Observations	510	516	515	511	505
R-squared	0.003	0.007	0.007	0.113	0.435

Source: Authors' analysis of Louisville rezoning data and 2016–20 American Community Survey data.

Notes: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. Model II's representation contrasts with the 61 cases represented by the individual owner and 4 cases without any representation. CUP = conditional use permit; IEM = industrial, employment, or manufacturing.

As other scholars have demonstrated, our data indicate that the Planning Commission's recommendation significantly influences legislative likelihood of approving a case.²⁰ Table 10 shows that after controlling for other potential influencing factors, a positive recommendation from the commission is associated with a 75 percent higher probability of legislative approval (model V; $p < 0.001$). This recommendation is the most important barometer in determining whether a local legislature approves a rezoning application.

In terms of neighborhood characteristics, tables 7 and 8 show that, on average, rezoning cases in high-income communities and communities with a higher share of white residents were more likely to be denied by the local legislature. But when we controlled for other case features in table 10, we find

less evidence for that outcome (models I and V). We find no significant association between the share of a neighborhood's population that is non-Hispanic white and legislative approval, nor did we find an association for household incomes (not shown). It may be that a significant share of that influence is captured not by local demographics but instead by public participation, as we found in table 5—and neighborhood characteristics *do* heavily influence public participation in hearings. We did, however, find that rezonings are significantly more likely to be approved in neighborhoods with higher unemployment rates, even after controlling for neighborhood race (model I). It may be that local legislatures are more likely to support investments in communities perceived as most in need, but it is not clear that the legislative body engages with local stakeholders in any methodical way to assess local needs.

We then evaluated applicant representation, finding no significant influence of having a planner or lawyer representing a case in front of the commission (models II and V). We also consider whether application rezoning types were associated with approval rates (models III and V). Here, the story varied based on whether or not we controlled for other features. Rezoning of properties in residential zones were somewhat less likely to be approved than other types of changes, though the significance of that difference was erased when controlling for all local factors, such as public participation, race, and Planning Commission recommendations.

Finally, we reinforce the preliminary conclusions from table 7 by finding that speakers at rezoning hearings appear to have significantly influenced legislative approval rates. Table 10 shows that after controlling for the total number of speakers, a 10 percentage-point higher share of speakers in favor is associated with a 1 to 3 percent higher probability of approval (models IV and V). This finding reaffirms the importance of public participation in planning decisions and, subsequently, the importance of improving equity of access to that public participation. Additionally, it affirms the need for local legislatures to maintain the comprehensive plan and ensure that zoning codes and rezoning decisions align with its goals, rather than approving piecemeal developments at differential rates across neighborhoods with different incomes.

Conclusions

Zoning laws and the related procedures adopted by local governments throughout the United States play an important role in influencing the availability of housing, access to public services, neighborhood aesthetics, quality of life, and much more. If too restrictive, they may hinder opportunities for new construction, thus contributing to inadequate housing supply in the context of growing demand, reducing the availability of a mix of services in neighborhoods, or discouraging easy access to employment. If too permissive, they may expose people with lower incomes to environmental contaminants related to certain types of land uses. Although baseline zoning rules encompass regulations related to what developers and landowners are allowed to undertake by right, most local zoning codes also include flexibility measures—from rezonings to variances and conditional uses—that allow local decisionmakers to make discretionary choices about whether and where to allow certain types of development. These types of measures have become increasingly popular approaches to regulating land use in cities nationwide.

We examine Louisville’s recent rezonings with the goal of exploring whether local legislative bodies have implemented them equitably. Overall, we find that building permitting is concentrated in higher-income neighborhoods and in neighborhoods with a higher share of white residents. A significant share of new development projects involves a rezoning application and discretionary review process; this suggests that the by-right zoning map and its associated districts function more as optional guidance than as definitive rules related to future development.

Local legislatures in Louisville, including the Metro Council, approve the vast majority of rezoning applications, but on average, we find that the rejected proposals are more likely to be for projects in wealthier, whiter neighborhoods. As a result, despite attracting more rezoning applications from landowners, reflecting development demand, communities with the highest incomes ultimately have fewer approvals overall. Although these neighborhood demographics have no direct relationship with approval rates once we control for other case characteristics, they are associated with a higher number of public participants in application hearings—and participants from these neighborhoods are more likely to oppose proposed rezonings. Legislative approval rates are significantly associated with the volume and tenor of that participation.

In sum, we find a moderated link between neighborhood demographics and rezoning approvals. People who live in neighborhoods with lower population densities, residents with higher incomes, and a higher share of white residents are more apt to engage in rezoning hearings, and they react to proposals

with greater opposition. Legislative decisionmakers appear to take their points of view to heart and are more likely to vote against rezonings in those neighborhoods. In the end, the number of successful rezonings in the highest-income neighborhoods is lower than that in the lowest-income communities—even though the inverse is true for rezoning applications and building permits. In this process, rather than being guided by dedication to an equitable comprehensive plan and a supportive zoning code, land-use decisions become heavily influenced by demographic disparities expressed through higher participation rates in the rezoning process. This may result in outcomes contrary to the comprehensive plan’s goal of “expanding opportunities for people to live in quality, variably priced housing in locations of their choice by encouraging affordable and accessible housing in dispersed locations throughout Louisville Metro” (Louisville–Jefferson County Metro Government 2019: 105).

Our research raises key questions about the role of discretion in zoning processes that merit further discussion and require evidence beyond the data we explore in this paper. Notably, does the influence of public engagement in the development process produce positive or negative outcomes? On the one hand, the magnified hesitation of local legislatures to support projects that arouse opposition from neighbors is indicative of a commitment among elected officials to the cause of participatory democracy. Providing residents of a community the opportunity to sway local decisionmakers can, in theory, allow them to resist the completion of projects that would harm their neighborhoods.

On the other hand, the association between resident participation, the tenor of that participation, and a project’s location in a neighborhood with higher incomes should ring alarm bells about the equity of current approaches to public engagement. Projects in high-income neighborhoods are much more likely to elicit opposition. This could mean that projects in less-well-off communities are more likely to receive support because of a desire to attract economic development—but we assembled no evidence that local legislatures specifically assessed neighborhood needs in their decisionmaking process. It could also mean that people who live in those communities have less capacity or fewer resources, affecting their ability to engage in public participation; renters, people with service employment, and those with few resources to afford babysitters or transit costs simply may face higher relative costs if they attend Planning Commission meetings. Some researchers also argue that low-income communities and communities with a higher share of people of color have experienced decades of marginalization and therefore exhibit low levels of trust in public officials or public participation (Marschall and Shah 2007). As a result, neighborhoods with a greater share of residents with lower incomes may be disproportionately exposed to negative outcomes from rezonings, such as environmental harms.

We find no evidence that local legislatures make decisions directly on racist or classist lines. But elected legislatures are responsive to public participation, and since participation is influenced by

variations in neighborhood attributes, legislative choices ultimately reflect varying outcomes. Policymakers may consider balancing public input by developing new policies that moderate the ease of access wealthy residents have to political participation and augment the participation of residents with lower incomes. Potential avenues for this could include:

- Generating racially and economically diverse, representative, and compensated deliberation or working groups (using models of participatory budgeting or deliberative democracy sessions);
- collecting randomized survey results on opinions related to a project; and
- encouraging more participation from people who have historically been unable to do so by offering child care or compensation for attendance in deliberative sessions; holding sessions in areas where potential residents of rezoning applications live; and holding sessions at different times of day to accommodate those who do not hold nine-to-five jobs.

The ability of residents of wealthier communities to successfully resist projects raises challenges, too. In some cases, their resistance could limit the ability of the Metro to provide adequate new housing in neighborhoods with high quality of life and access to convenient amenities. In so doing, these residents could further entrench the segregation and inequities present in every American city, since their actions could encourage developers to build outside of their neighborhoods—or not build at all. In the end, their work to limit new construction, particularly in zoning districts currently restricted to single-family homes, may be reinforcing decades of inequitable development and preserving certain types of neighborhoods just for those who can afford them.

At the same time, it is worth considering rezoning applications from the developer's perspective. The willingness of landowners to request rezonings so frequently suggests that they perceive the costs inherent in these applications—including additional layers of review, a longer approval period, and added fees—as worth the risk given the potential benefits (notably, the possibility of building in a manner unauthorized under by-right zoning). This could mean that the rezoning process provides well-resourced developers an easy opportunity to expand their property values. And it could indicate an erosion of the influence of planning in general, since by-right zoning policies are, at least in theory, meant to reflect the community's view about what sorts of investments should be made where. The high rates of rezoning approvals could also mean that current by-right zoning is inadequate in offering room for new development that meets the demand to invest in the community.

Planners seeking to assess the normative quality of rezoning applications should consider the disconnect between the comprehensive plan and zoning code. If the comprehensive plan is designed to support equity but the zoning code is not, then rezoning applications that ostensibly support the

comprehensive plan should be approved and may require a temporary, imbalanced pattern of rezonings to implement the plan's vision until officials can implement a citywide rezoning. However, if both the plan and the zoning code are aligned, then these patterns of participation-influenced disparate approval rates indicate an inequitable trend in which developers will ignore the comprehensive plan and/or zoning code in pursuit of market demand in low-income neighborhoods, but be required to more stridently adhere to the strictures of the plan and code in wealthy neighborhoods that put up a fight.

In Louisville's case, it is possible that current by-right zoning policies do not match the goals of the comprehensive plan and that legislative actions reflect an acknowledgment that this is the case. Instead of resolving this problem by using rezonings as a shortcut—an approach that increases review times and skews toward the views of high-capacity inhabitants—localities like Louisville might consider reducing review requirements or conducting a Metro-initiated rezoning that better supports the goals of the comprehensive plan and anticipates development demand in advance. In either case, the widespread use of rezonings as a core element of the development process strongly suggests that by-right zoning is only a small part of the story when it comes to understanding how land-use regulations shape development.

Future Research Directions

Additional research is necessary to better understand the role that rezonings and other flexibility measures play in the use of zoning policy in cities across the United States. Although we have provided insight into the varying rezoning mechanisms used in Louisville, other cities could conduct similar studies to further substantiate our findings. These are necessary to achieve the goal of understanding not just baseline, by-right zoning but also all the elements of land-use regulations that affect peoples' lives. Planners and legislators need better guidance around how to structure allowances for divergence from by-right rules in zoning laws to ensure equitable application and outcomes.

Several barriers make it difficult to pursue this type of analysis. First, because states and localities have dramatically varying land-use regulations, identifying points of comparison between them is challenging. Second, the process of approving rezonings and other measures such as variances and conditional uses is locality specific. Differences between communities related to public notice and hearing requirements may have a major role in influencing whether rezoning processes produce equitable outcomes.

Finally, more research is needed to explore the content of rezoning applications put forward. In our research, we did not have adequate information to determine, for example, how well the individual projects supported or departed from the comprehensive plan; whether the denied projects included environmentally harmful elements; or whether they could have played a role in strengthening social and racial justice in Louisville. Further investigations in this direction would help us better understand whether rezonings—and the rezoning process itself—are a net societal positive or negative in the region and provide a full methodological approach for how other jurisdictions might assess the equity of their rezonings.

Appendix A. Conditional Uses in Louisville

TABLE A.1

Example Uses Requiring Conditional Use Permits in the Current Louisville Land Development Code

District	Use Requiring Conditional Use Permit
<ul style="list-style-type: none"> ▪ Old Louisville/Limerick Traditional Neighborhood Zoning District ▪ Planned Zoning Districts-Neighborhood General/Neighborhood Center ▪ Planned Zoning Districts-Neighborhood Transition-Center/Edge Transition ▪ Planned Zoning Districts-Neighborhood Transition-Center ▪ R-R/R-E/R-1/R-2/R-3/R-4/R-5/R-6/R-7/R-8A ▪ R-R/R-E/R-1/R-2/R-3/U-N/R-5A/R-5B/R-6/R-7 ▪ All Office, commercial, and industrial zones ▪ All zones 	<ul style="list-style-type: none"> ▪ Homeless shelters ▪ Transitional housing
<ul style="list-style-type: none"> ▪ R-R/R-1/M-2/M-3 ▪ R-1/EZ-1/M-2/M-3/W-3 ▪ All commercial and industrial zones 	<ul style="list-style-type: none"> ▪ Package liquor stores ▪ Tavern, bar saloon ▪ Boarding and lodging houses ▪ Camping areas and recreational vehicle parks ▪ Daycare facilities ▪ Camping areas and recreational vehicle parks ▪ Commercial communication towers ▪ Extraction and development of oil, gas, and other hydrocarbon substances ▪ Firewood production and sales ▪ Hospitals, clinics and other medical facilities ▪ Nursing homes and homes for the infirm or aged ▪ Rehabilitation homes ▪ Sewage disposal plants ▪ Composting facilities ▪ Construction/demolition debris facilities ▪ Crematories

Source: Louisville Metro Land Development Code as of November 2020.

Notes: This table presents select examples and is not meant to be comprehensive.

Appendix B. Associations between Neighborhood Characteristics and Development

TABLE B.1

Regressions of Block Group Building Permit and Rezoning Applications, 2010–20, by Neighborhood Characteristics

	I	II	III	IV	V	VI
	Total Permits per Block Group	Annual Permits per Block Group	Total Rezonings per Block Group	Annual Rezonings per Block Group	Total Rezonings per Block Group	Annual Rezonings per Block Group
Building permits	—	—	—	—	0.01** (0.00)	0.00 (0.00)
Median household income (log)	6.58*** (1.72)	0.65*** (0.10)	-0.21** (0.10)	-0.02*** (0.01)	-0.29*** (0.10)	-0.02*** (0.01)
Share of residents unemployed	13.99 (10.06)	1.32** (0.56)	-0.56 (1.01)	-0.05 (0.07)	-0.72 (1.11)	-0.05 (0.07)
Population density (log)	-4.83*** (0.96)	-0.50*** (0.07)	-0.49*** (0.09)	-0.04*** (0.00)	-0.43*** (0.06)	-0.04*** (0.00)
Intercept	-27.68 (20.55)	-9.86*** (1.27)	7.15*** (1.51)	-0.00 (0.07)	7.46*** (1.28)	0.01 (0.07)
n	602	6,622	602	6,622	487	6,622
Adjusted R ²	0.13	0.03	0.10	0.02	0.12	0.02

Sources: Authors' analysis of Louisville rezoning and permit data; 2016–20 American Community Survey data at the block group level.

Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$. Robust standard errors are in parentheses. Total permits and rezonings sum the total number of each in every block group over the 2010–20 period (though there were no permit data for 2020). Note that, for annual permit analysis, we assume building permit levels in 2020 matched those in 2019. Rezonings include both applications that are approved and denied.

Appendix C. Supporting Tables

TABLE C.1

Rezoning Application Neighborhood Characteristics by Planning Commission Approval Status, 2010–2020

	PC Recommended Rejection	PC Recommended Approval	t-test of Significance
Median household income	\$67,980	\$61,574	
Share of adults 25 and older with a bachelor's degree or higher	45%	33%	*
Share of housing that is owner occupied	68%	59%	
Share of population that is non-Hispanic white	80%	70%	*
Share of workers who are unemployed	4%	6%	

Sources: Louisville Metro Office of Planning and Design Services and 2020 Decennial Census data.

Notes: * $p < 0.05$. PC = Planning Commission.

TABLE C.2

Correlation between Block Group Racial, Wealth, and Education Characteristics in Louisville's Rezoning Block Groups, 2020

	Share Non-Hispanic White	Median Household Income	Share with a Bachelor's Degree or Higher	Share of Housing that Is Owner-Occupied
Share of population that is non-Hispanic white	1			
Median household income	0.4064***	1		
Share of adults 25 and older with a bachelor's degree or higher	0.4490***	0.5294***	1	
Share of housing that is owner occupied	0.4405***	0.5195***	0.1552**	1
Share of workers unemployed	-0.2708***	-0.2664***	-0.3111***	-0.2316***

Source: 2020 Decennial Census.

Note: *** $p < 0.001$; ** $p < 0.01$.

TABLE C.3

Multivariate Regressions Showing Relationships between Planning Commission Approval and Case Characteristics

	I	II	III	IV	V	VI
	Neighborhood Model	Speakers Model	Representation Model	Rezone Type Model	Case Component Model	Full Model
Share of population that is non-Hispanic white	-0.053*					-0.015
Share of workers who are unemployed	0.067					-0.036
Total speakers		-0.002				
Share of speakers in favor		0.224***				0.246***
Lawyer representative			0.037			0.035*
Planner representative			0.024			
Residential rezoning				-0.045***		-0.037**
Commercial rezoning				0.027		0.009
IEM rezoning				0.001		-0.019
Upzoning				-0.037		-0.032
Landscape waiver					-0.025	
Waiver					-0.033*	
Variance					-0.073**	
Complexity					0.039**	-0.000
CUP						0.0311
Variance						-0.0299
Constant	0.999***	0.785***	0.935***	1.000***	0.977***	0.785***
Observations	511	511	517	516	503	494
R ²	0.006	0.126	0.005	0.030	0.016	0.154

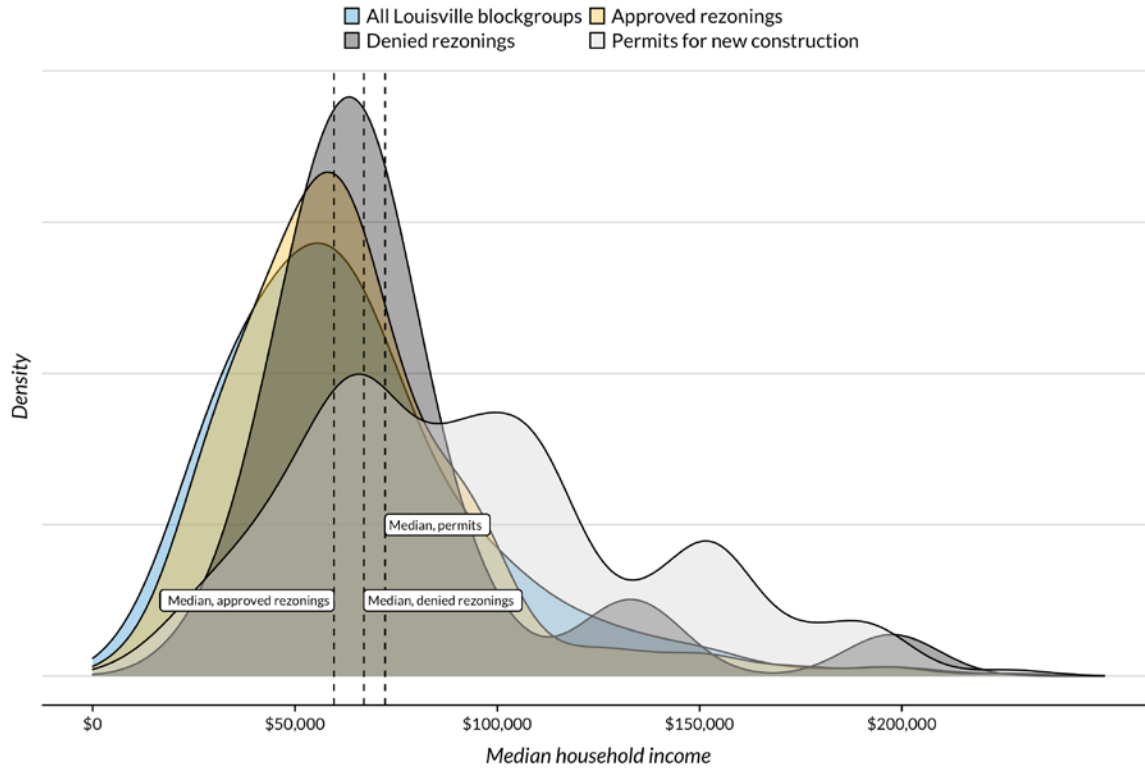
Source: Author analysis of Louisville PDS rezoning and US decennial 2020 census data

Notes: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. Robust standard errors. CUP = conditional use permit; IEM = Industrial, enterprise, or manufacturing. Complexity is the sum of how many types of flexibility measures are added on top of the base rezoning request (e.g., including variance, waiver, CUP, and/or landscape waiver).

Appendix D. Rezoning and Permits by Neighborhood Incomes

FIGURE D.1

Density of All Rezonings and Permits by Block Group Median Household Income



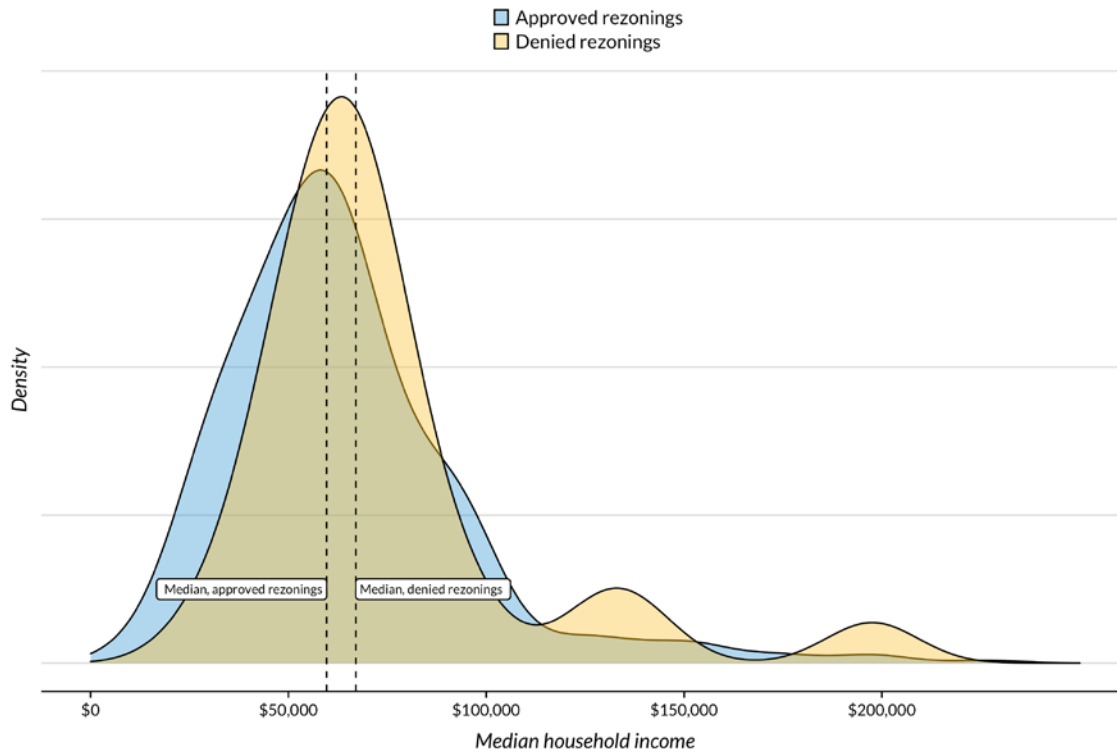
URBAN INSTITUTE

Source: Authors' analysis of Louisville rezoning dataset and 2016–20 American Community Survey data.

Notes: This figure does not include block groups for which no median household income information was available or rezonings that were neither approved nor denied.

FIGURE D.2

Density of Approved and Denied Rezoning by Block Group Median Household Income



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Source: Authors' analysis of Louisville rezoning dataset and 2016–20 American Community Survey data.

Notes: This figure does not include block groups for which no median household income information was available, or rezonings that were neither approved nor denied.

Notes

- 1 "AICP Code of Ethics and Professional Conduct," American Planning Association, accessed October 12, 2022, <https://www.planning.org/ethics/ethicscode/>.
- 2 Suhail Bhat, "Louisville Is More Diverse than Ever but Remains Largely Segregated," WFPL, September 23, 2021, <https://wfpl.org/louisville-is-more-diverse-than-ever-but-remains-largely-segregated/>.
- 3 Joseph Waldman, "Record 20-ZONE-0080: Change in Zoning-Form District, Cedar Creek Road Apartments," Louisville Metro Business Portal, August 18, 2020, <https://aca-prod.accela.com/LJCMG/Cap/CapDetail.aspx?Module=Planning&TabName=Planning&capID1=20CAP&capID2=00000&capID3=05AQQ&agencyCode=LJCMG&IsToShowInspection=>.
- 4 Louisville's code in this area is cumulative, so the C-3 zoning district still allows residential development (with the exception of single family) in this area but the rezoning allowed for high-density retail and commercial development.
George Hauck and Jean Lee, "Record 19ZONE1021: Change in Zoning-Form District, Goss Ave" Louisville Metro Business Portal, March 4, 2019, <https://aca-prod.accela.com/LJCMG/Cap/CapDetail.aspx?Module=Planning&TabName=Planning&capID1=19HSF&capID2=00000&capID3=06NQ5&agencyCode=LJCMG&IsToShowInspection=>
- 5 Al J Schneider Company, "Record 18ZONE1019: Change in Zoning-Form District, Galt House East," Louisville Metro Business Portal, March 5, 2018, <https://aca-prod.accela.com/LJCMG/Cap/CapDetail.aspx?Module=Planning&TabName=Planning&capID1=18HSF&capID2=00000&capID3=05U85&agencyCode=LJCMG&IsToShowInspection=>.
- 6 Moss Creek Enterprises LLC, "Record 18ZONE1011-PA: Change in Zoning-Form District Pre-Application, 6110 Goalby Drive," Louisville Metro Business Portal, February 12, 2018, <https://aca-prod.accela.com/LJCMG/Cap/CapDetail.aspx?Module=Planning&TabName=Planning&capID1=18HIS&capID2=00000&capID3=0F59A&agencyCode=LJCMG&IsToShowInspection=>.
- 7 Interestingly, Fischer, Stahl, and Baird-Zars (2022) find that variances in New York City were clustered in wealthy neighborhoods, where wealthier landowners and developers were able to enhance their properties. Neighborhoods with a greater share of residents who are non-Hispanic white were more likely to host variance applications, notes Cai (2014). Variances became a tool for individual owners—often owners of single-family homes—to enhance their properties. Thus, motivations for variances are likely different than those for rezonings.
- 8 Louisville Metro is different from the Louisville/Jefferson County, KY-IN core-based statistical area, which is the broader metropolitan area that encompasses several suburban counties.
- 9 Municipalities that continue to manage their own zoning policies, but still have to abide by the Metro's comprehensive plan, include Anchorage, Douglass Hills, Graymoor-Devondale, Hurstbourne, Indian Hills, Jeffersontown, Lyndon, Middletown, Prospect, Shively, St. Matthews, and St. Regis Park.
- 10 In our analysis, we do not evaluate differences between rezonings that received final approval from the Metro Council as opposed to one of the other municipalities in Jefferson County. That said, we found no association between Metro Council being the final approver (or not) and outcomes in a regression we conducted on the rezoning dataset.
- 11 "Confronting Racism in Zoning," LouisvilleKy.gov, accessed October 1, 2022, <https://louisvilleky.gov/government/planning-design/confronting-racism-zoning>.
- 12 "Zoning Map Amendment Procedures," Louisville Metro Planning and Design Services, accessed October 1, 2022, <https://louisvilleky.gov/planning-design/document/rezoning-process>; "Land Development Code,"

LouisvilleKy.gov, accessed October 1, 2022, <https://louisvilleky.gov/government/planning-design/land-development-code>.

- ¹³ KRS 100.237.
- ¹⁴ Kentucky law limits variance use to dimensional changes. KRS 100.241 to 100.247.
- ¹⁵ "Bylaws, Louisville/Jefferson County Metro Government Board of Zoning Adjustment," Louisville Metro Government, accessed October 1, 2022, <https://louisvilleky.gov/planning-design/document/boza-bylaws-and-policies>.
- ¹⁶ Louisville Metro. 2022. Louisville Metro KY - Active Permits. June 18. <https://data.lojic.org/datasets/louisville-metro-ky-active-permits/explore>.
- ¹⁷ Similar findings can be found in Yonah Freemark and Gabi Velasco, "Louisville Is Using Zoning Reform to Tackle Inequity. Could This Work for Other Cities?" *Urban Wire* (blog), Urban Institute, March 12, 2021, <https://www.urban.org/urban-wire/louisville-using-zoning-reform-tackle-inequity-could-work-other-cities>.
- ¹⁸ Beyond the materials submitted to the commission for review and the on-the-record deliberations of the commission, the Metro Council is not permitted to review additional information or engage in conversations about a project.
- ¹⁹ Model I focuses on two characteristics of interest not subject to multicollinearity issues, excluding the other features (e.g., income, share of residents with a college degree or more, and share of residents earning less than the federal poverty measure). Appendix C contains tables showing the degree of correlation between the multiple census characteristics for the neighborhood that highlight the nexus of race, wealth, education, and employment that decades of systemically racist policies and practices have produced.
- ²⁰ Appendix C, table C.3 contains a regression showing the same inputs into Planning Commission decisions. This table shows that a 10 percent increase in the share of speakers in favor increases the probability that the Planning Commission recommended a case for approval by 2.5 percentage points ($p < 0.001$). However, it also shows that cases with variances and waivers are less likely to receive approval, but cases with more stacking of discretionary components (i.e., cases with greater complexity) are more likely to receive a positive recommendation; this is likely due to the amount of collaborative cooperation work with the planning department each component requires to prepare. The final regression model also shows that the Planning Commission is less likely to approve residential rezonings and is more inclined to support rezoning cases represented by an attorney.

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