

**Supply Bros and Rent Woes:**  
Mapping the changing structure of housing discourse in times of crisis

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**Abstract (150 words)**

*How is the structure of rental housing policy debate in the US changing?* We map the rental housing policy discursive field via online speech between 2015 and 2023, covering the 2007 financial crisis aftermath and Covid-19. Six policy areas comprise rental housing policy: (1) *private rental*, (2) *subsidized rental*, (3) *state-owned*, (4) *pro-supply*, (5) *anti-development*, and (6) *fair housing*. We measure political speech on Twitter with 41 keywords that proxy public debate and agenda setting, creating a corpus of 13.5 million tweets. We find an expansion and changing structure of discourse on rental housing in which two macro-socioeconomic shocks featured centrally, from a smaller discussion pre-Covid-19 in which public and subsidized housing prevailed, toward an expansion during the pandemic of speech addressing tenant precarity: price controls, eviction protections, and anti-discrimination. Our findings illustrate the rise, resilience, and dominance of discourse around rent woes: strong-state and tenant-protectionist policy.

**Keywords:** housing policy, rental housing, discursive field, social media, Covid-19

**Words:** 9,017 (including sources)

**Introduction**

The nature of public debates about housing is changing in the United States, with the rental sector attracting increasing attention. Housing financialization via subprime lending triggered the 2007 global financial crisis (GFC) and recession thereafter, turning more households into renters and sparking anti-eviction skirmishes. Homes played a central role during the Coronavirus Pandemic (Covid-19) and subsequent economic crisis: families sheltered in place, renters demanded to #cancelrent, and elected officials passed eviction moratoriums across the country. Recovery from the GFC has been highly uneven economically, racially, and geographically (Tilly 2018; Le Galès and Pierson 2019). Over the past decade, the growth of wealth among the super-rich has outpaced growth in either wages or asset accumulation in homeownership (Piketty 2014), while research and policy attention has intensified on

inequality (Piketty, Saez, and Zucman 2022) and polarization (Fiorina and Abrams 2008; Hacker and Pierson 2019). Many metropolitan areas across the country remain unaffordable to lower- and middle-income people: cost-burdening households and leading many to sacrifice decent, healthy conditions and community relationships (JCHS 2022).

The widespread affordability crises across the United States that characterized the last fifteen years galvanized residents, advocates, pundits, and elected officials to speak up about policy change. Polarizing debate has grown among different stakeholders, especially around the themes of upzoning, neighborhood change, and rent control, to such an extreme that landlord associations offer trainings in active shooter preparation for their members that rent out apartments.<sup>1</sup> Our title provocatively frames one polarizing tension (among others), as to whether policies advocating expanded housing supply (promoted by ‘supply bros,’ as they’re pejoratively labeled by opposition) or directly addressing economic hardship from soaring rents and evictions (‘rent woes’) dominate in mass speech.<sup>2</sup> In this article, we grapple with changing rental politics across the United States since 2015, when Twitter gained significant followers, and with particular attention to the pandemic period. *How is the structure of rental housing policy debate in the US changing in times of crisis?*

This paper examines the growth of mass political discourse about rental housing in the United States, through the proxy of social media activity on Twitter, in order to interpret the dominant trends. Online discourse serves as a lens into understanding mass salience of political topics, as: (1) there are 95 million twitter users across the United States, meaning approximately 28% of total population (including children) engages with Twitter; and (2) in

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<sup>1</sup> Apartment Association of Greater Los Angeles, “Active Violence Emergency Response Training,” August 17, 2023. <https://aagla.org/event/avert-active-violence-emergency-response-training-2/>, accessed on August 21, 2023.

<sup>2</sup> For example, see Denver City Councilmember Lisa Calderón on ‘YIMBY Bros’ appropriating various BIPOC language on Twitter 7 June 2022 <https://twitter.com/lisaemergeco/status/1533992901218340864?lang=en> Accessed 8 May 2023; or Kian Goh on ‘housing bros’ on Twitter 25 December, 2022, <https://twitter.com/kiangoh/status/1606838072649601024>, accessed on 24 April 2023.

2022, 50% of adults in the United States access news on social media (Pew Research Center 2022). “Housing Twitter” – people sharing about housing topics on Twitter – has become a recognized place to discuss ideas, organize constituents, or heckle opponents, culminating into the largest arena for housing debate among ordinary people, activists, journalists, planners, academics, and political leaders (Brasuell 2019; Anzilotti 2019; Shepherd and Myers 2021).<sup>3</sup> Despite the increased attention and debate about housing online, a gap remains in measuring, analyzing, and interpreting the shape of these debates. To address this, we map housing speech online as a discursive field, attending to the themes that dominate and how macro-socioeconomic shifts, such as the Covid-19 crisis, punctuate speech over time and space.

We focus on the rental sector. Rental housing policy tweets between 2015 and 2023 serve as a window into understanding discussed topics, focusing on English language content about the United States. Twitter provides an efficient method to quickly identify and assess dominant themes, what topics generate intense debates, and how people discuss them. We used Twitter’s Application Programming Interface (API) to pull 13.5 million tweets representing six Policy Areas (or general clusters of similar types of policies) related to rental housing: (1) *private rental*, (2) *subsidized rental*, (3) *state-owned*, (4) *pro-supply* and (5) *anti-development*, and (6) *fair housing* (see TABLE 1). Then we divided the data into three time periods – before, during, and after peak-Covid-19 – to examine how discourse shifted during the most significant socioeconomic shock of the last decade.

We find that most debate on rental housing policy centers on interventions in failed markets to protect tenants against high rents and evictions, and around public housing, followed by discussions of discrimination and subsidized housing, trailed by housing supply or development debates (both for and against). *Private rental* regulations and *fair housing* speech

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<sup>3</sup> The platform is changing since the purchase by Elon Musk, however our corpus ends before major changes took place, such as removal of influencer authentication by blue check mark.

rose significantly after the onset of Covid-19 in March 2020, with all the other policy areas seeing some expansion as well, illustrating the escalation of housing policy debate over the past three years, despite Twitter users plateauing and Covid-19 receding. We interpret the data through a heuristic two-by-two chart introduced below, and determine that most discourse concentrated on policy tools applying *strong state interventions* and *protections of tenants*, as opposed to mechanisms relying on *market forces* or *production of new units*. Times of crisis triggered the growth and thematic emphasis on *strong-state* and *tenant-protectionist* policy, which is to say addressing ordinary people's immediate rent woes: high rent, threat of evictions, racial and other forms of discrimination.

The paper is structured as follows. First the Literature Review builds linkages between research on agenda setting, discursive fields, comparing sets of housing policies, and Twitter as a source of data. Next, the Method and Data section details how we use Twitter, building and cleaning our dataset, and interpretation. Third, the Findings section illustrates the dominant trends, how crisis influenced emphasis and intensity over time, source of tweets, hashtags, and geographical focus.

## **Literature review**

### *The growing significance of rental housing*

National homeownership rates and public favorability of purchasing have declined since the onset of the GFC (Gallup 2023). US homeownership peaked in 2006 at 69% and fell to its lowest level in decades in 2016 at 63% (US Census Bureau 2021). It saw some recovery since 2016 to 66% in 2022. Put another way, despite the country adding 25 million people between 2006 and 2016, the number of homeowners decreased by nearly 2 million. Especially among communities of color, former owners returned to renting. Meanwhile renters remain underrepresented at all levels of government (Einstein, Ornstein, and Palmer 2022). The

economic shock of the GFC and unequal access to housing has led to growing advocacy and pressure for government intervention (Dougherty 2022).

Policy responses have varied. While New York passed new legislation curtailing rent gouging, Minneapolis reformed single-family zoning, and California and Oregon did both. Many of these reforms originated with political advocacy organizations connecting and mobilizing with their members and the public through new digital channels. During this time period, housing scholars have made a range of major contributions on a variety of housing topics, such as situating rental housing in political economy (Aalbers and Christophers 2014), financialization and racial capitalism (Fields and Raymond 2021), foreclosures (Hall, Crowder, and Spring 2015), evictions (Leung, Hepburn, and Desmond 2021), single family conversions (Abood 2017; Christophers 2022), zoning reform (Manville, Monkkonen, and Lens 2020), and debating policy solutions (Rodriguez-Pose and Storper 2019; Manville, Lens, and Monkkonen 2020; Imbroscio 2021).

However, while some work has explored the political dynamics of housing in regards to lobbying (Jacobs 2015), local participation (Yoder 2020), attitudes on development (Manville 2021), and tenant advocacy (Card 2022), little scholarship broadly explores housing politics in times of crisis. Therefore, following Kemeny's suggestion to link housing studies with research innovations across the social sciences (1992, xv), we draw on recent work in political science and the sociology of fields to explore how online discourse and policy agendas operate as broad political processes.

### *Linking agenda setting, discursive fields, and housing policy debate*

Behavioral economists have long held the foundational assumption that the goals of political leaders roughly match those of the public, represented by the median voter (Downs 1957, 140). This relationship between representatives and their constituents holds even at the local level,

where ideological orientation is assumed to be less influential, despite institutional variation (Gerber and Lewis 2004; Tausanovitch and Warshaw 2014). Yet, behaviorists are not without critics. In a new subfield in US political science called American political economy (APE), proponents of APE argue that behaviorists “[tend] to downplay the highly consequential political contestation that shapes the terrain on which mass politics unfolds” (Hacker et al. 2022, 199). Hacker and colleagues suggest that in order to grapple with growing inequality and polarization, political scientists should focus on the intersection of governance and markets, and the role of power across political arenas. Whereas much attention focuses on the so-called “last mile” of politics – where legislation is debated, passed, and implemented – APE encourages attention on the preceding activities of meta politics: “the processes of institution shaping, agenda setting, and venue shopping” (2022, 198). While some APE scholarship has taken up housing, in particular the role of exclusionary zoning and how housing constitutes the largest share of family wealth and local tax revenue (Trounstine 2021), we see an opportunity to contribute to the understanding of housing policy agendas. While we sympathize with the generalization by Ogorzalek that “the nation’s housing agenda ... relies almost entirely on incentives for private action that are insufficient to meet this challenge” (2021, 205), we aim to interrogate empirically the nation’s broader housing agenda. Therefore, following APE, we refocus analysis on political dynamics of agenda setting that impact one of the most housing-disempowered groups: renters.

Typical research on agenda setting captures how elites gatekeep the process of ideas moving through political channels toward legislation. “Elites,” as Khan defines, are “those who have vastly disproportionate control over or access to a resource” (2012, 362). Typical *elite agenda setters* are politicians (drafting bills), party leadership (establishing priorities), academics (publishing White Papers), public officials (allocating resources), journalists and

editors (privileging certain informants or op-ed authors), CEOs, lobbyists, etc.<sup>4</sup> Whereas, *non-elite agenda setters* are ordinary people without privileged access to political influence. “One may engage in politics,” Weber wrote long ago, “and hence seek to influence the distribution of power within and beyond political structures, as an ‘occasional’ politician” (1946, 83). A direct comparison between elite and non-elite agenda setting is beyond the scope of this paper.<sup>5</sup> Rather we share some trends of *elite agenda setters* on housing in a nationwide survey, and then paint a broader picture of online political speech, which has become the dominant arena to contest agendas between elites, non-elites, and in-between advocates. Social media is a space of interaction and contestation among the public, and so a close tracking of ideas online serves the understanding of the broader trajectory of political agendas across the country.

Elected officials commonly serve as the archetype of an elite agenda setter. In the 2022 Menino Survey of Mayors across the US, for example, “Mayors’ concerns about housing dwarfed other issues,” with 81% selecting “housing costs as one of the top two economic challenges in their city” (n=118, Einstein, Glick, and Palmer 2022, 3). In an open-ended response format, 47% of mayors suggested either “increasing the housing supply” or “increasing affordable housing funding” as policy strategies that could be taken to alleviate high housing costs (Einstein, Glick, and Palmer 2022, 5).<sup>6</sup> The agendas pointing to two mechanisms (increasing supply and subsidies) can serve as a crude foil of the agendas of political elites, consistent with Ogorzalek’s aforementioned characterization of the national housing agenda that suggests it is dominated by incentivizing individual actors (2021, 205).

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<sup>4</sup> On academic agenda setting, “ideological hegemony and power in housing research,” see Kemeny (1988).

<sup>5</sup> Previous works have debated whether elites control agendas (Dahl 1957; Lukes 2015), or which other mechanisms of power influence public perceptions and ideology (Lukes 2021). For a survey-based analysis of tenant ideology and homeownership, see Heskin (1983), reinterpreted by Lind and Stepan-Norris (2011).

<sup>6</sup> The trends hold also over time. Pre-Covid-19, in 2018 the Menino survey found that 70% ‘of mayors want[ed] to see housing growth accelerate’ (Palmer and Einstein 2019, 2). In order to alleviate poverty, mayors again responded with housing solutions: 58% suggesting rent subsidies and 56% homeownership strategies (Einstein, Glick, and Palmer 2022, 2).



To grapple with agenda setting across the country, we combined research on (1) political communication, (2) discourse analysis in housing research, and (3) the sociology of fields. First, mass media has long been known to influence agenda setting (McCombs and Shaw 1972), laying the groundwork prior to drafting legislation (Liu et al. 2010, 69): to “inform and persuade,” “coordinate,” or “prime” voters (Dickson and Scheve 2006, 10).<sup>7</sup> “The structure of communication,” Chaffee writes, “shapes the structure of politics, both because so much of political activity consists of communication and because constraints on communication limit the exercise of power” (2001, 237–38). Social media provides a new opportunity for measuring the salience of various political topics, especially among groups traditionally playing a less substantial role in political debate, like the millions of Twitter users in the US. “Patterns of grievance expression and advocacy campaigns,” Carpenter writes, “begin as attempts to address issues of nondemocracy in agenda matters” (2023, 8.3). Social media remains more accessible to non-elite groups precisely because traditional gatekeeping barriers to traditional channels – party meetings, interest groups, news sources – do not apply. Social media may even serve, as Bennett suggests, as a platform for the “democratization of truth” (2017, 258).

Second, scholars have long applied discourse analysis to housing studies, addressing the relationship between language, power, and policy. “To understand how housing policy is generated,” Jacobs and Manzi write, “insight can be gained from an analysis of the way in which certain terms gain acceptance. From this a connection between housing discourse and policy generation becomes apparent” (1996, 558). Discourse analysis clarifies how language influences the “construction of problems” (Jacobs et al 2003, 429), defining what is debatable in the public sphere. Scholars applying other traditions have drawn similar conclusions. Applying historical intuitionism and path dependency, Bengtsson advocates for deepening

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<sup>7</sup> For example, policymakers and academics often advance agendas through op-eds – especially around pro-supply and subsidized rental housing – through publishing op-eds (Wiener and Kammen 2019; Steinberg 2019; Been and Ellen 2023).

analysis of housing politics by combining *political actors* and *institutions* (2015, 677), such as “to relate formal institutions to *ideational* (or discursive) institutions defining the policy problems” (2015, 687). Therefore, we take from these studies the insistence to question how problems are defined and which ideas are considered in housing politics.

Finally, sociologist Bail and colleagues provide an instructive strategy for measuring and interpreting mass political discourse. The concept of “public conversation” is particularly foundational and instructive, which is “a discussion between at least two people about a social problem in a setting that can be observed by others” (Bail, Brown, and Mann 2017, 1189). Scholars extend conversations to online social media activity, suggesting that researchers construct broader “discursive” or “conversational fields,” defined respectively as “the public battlegrounds where collective actors compete to give meaning to an issue” (Bail 2012, 857), or “the social spaces where public discussion occurs about a given social problem” (Bail, Brown, and Mann 2017, 1190). Once the discursive fields are constructed, analysts can interpret longitudinal and macro-socioeconomic trends, for instance, whether policy mechanisms discussed in the field reflect discursive trends of elites, conform to neoclassical market logics, or lean toward stronger welfare state intervention.

### *Analyzing sets of housing policy*

Recent work in housing studies provides a bird’s-eye-view of multiple types of housing policy, which informs our selection criteria. First, Freemark (2023) examines all recent literature on how upzoning and downzoning influence construction, costs, and demographics. Freemark’s keywords became a starting point for our analysis, which we extended further. Two other papers were beneficial in confirming that the breadth of our six policy areas addressed major currents in housing policy. Chapple et al. (2022, 3) examine twelve types of *local* housing policy that aim to prevent displacement, finding that *pro-production* and *rent control*

policies receive the highest level of research attention. Finally, Hatch (2017) compares 22 *state* tenant-landlord laws across the country to typify states as *protectionist*, *probusiness*, or *contradictory*, in terms of whether regulations favor tenants or landlords, illustrating how tenants relocate less often in pro-business states. We reviewed the policies under examination by Hatch (2017, 118) to confirm that the most prominent policies she identified (rent control and price increase) are included in our sample, while more technical policies were excluded (e.g. late fees, quiet enjoyment). This recent scholarship develops important findings on how housing policy is operationalized and how it affects markets, segregation, mobility, and inequality. Our analysis complements these findings by expanding our understanding of discourse and agenda setting across the spectrum of rental housing policy mechanisms in the US.

#### *Twitter as data*

Social media has gained traction as a major source of research data over the past decade across the social sciences, urban humanities, and increasingly to study urban issues. Twitter not only provides a valuable perspective from people involved in various salient conversations, its massive bandwidth also produces a more consistent coverage than newspapers (Steinert-Threlkeld 2018). Where news reports are selective, often relying on established sources and organizations, Twitter's expansiveness can help establish how people's discussion of topics has transformed over time.<sup>8</sup> Online activity provides one easily accessible, big data source for planners and policymakers to measure online behavior and public speech. Analyzing tweets in planning, scholars have observed negative sentiment towards transit patrons and how public

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<sup>8</sup> Twitter had made its data available freely to academic researchers until Elon Musk purchased the platform, eliminating free access on 29 April 2023. Our dataset is now presumed to be unique in that it cannot be replicated except by a steep purchase price.

agencies can actively engage on Twitter to combat disparaging slurs (Schweitzer 2014), the perceptions of neighborhood transition (Hess, Iacobucci, and Väiko 2017), academic careers (Sanchez 2021), and hashtags to examine the spread of movements like Black Lives Matter (Dadas 2018), relationships with movement opposition (van Haperen, Uitermark, and Nicholls 2023), and group dynamics in immigration reform (Nicholls, Uitermark, and van Haperen 2021).

Twitter has the advantage of combining multiple types of data to create a rich unit of analysis that can be broken down into different issues. Researchers often use only parts of the available data. For example, Twitter allows users to attach precise geographic location to their tweets. While only about 1% of all users choose to share their location, when multiplied by millions of users over years, this can generate tens of thousands of data points. This feature has been used to study segregation in cities (Shelton, Poorthuis, and Zook 2015), mobility in New York City (Wang et al. 2018), and to predict gentrification (Chapple, Poorthuis, et al. 2022). Furthermore, places mentioned within tweets can also yield location. We combine thematic, temporal, and geographical data to paint a complete picture of the housing twitter landscape.

We believe the primary richness of Twitter data is the text itself. Textual analysis usually relies on first creating a database pertaining to a specific topic before analyzing the content of relevant tweets. Scholars employ “‘tweets’ as a proxy to measure attention being paid to political issues” (Barberá et al. 2019, 884). For instance, the growth of social media platforms since the GFC also runs parallel to a cycle of contentious politics by way of connective action (Bennett and Segerberg 2012), and across a range of issues: climate change, women’s rights, Black Lives Matter, LGBTQ, trans rights, and migrant rights. By measuring mass political discourse online, we mean “to enlarge the human conversation by comprehending what others are saying” (Carey 1989, 47).

## **Method and Data**

### *Defining housing discourse and data retrieval*

Much of the minutiae of housing policy lie outside large-scale public debates, due to its highly technical nature. Our data selection and collection aimed to create an overview of mass speech about rental housing policy, which captured its main contours, acknowledging non-comprehensiveness. We first identified the six primary *policy areas* related to rental housing in the United States: (1) *private rental*, (2) *subsidized rental*, (3) *state-owned*, (4) *pro-supply*, (5) *anti-development*, and (6) *fair housing* (see Table 1). These broad *policy areas* encompass specific tools applied to housing at the intersection of markets and government, and capture the essence of policy debates without getting too specific.<sup>9</sup> For example, federal assistance for private rental housing, such as Section 221(d)3, which insures mortgages to facilitate the construction of new multifamily units is relevant policy, but hardly in the public eye. However, debates about exclusionary zoning and the supply of multifamily housing under the slogan of “Yes In My Backyard” (YIMBY) have received growing attention in recent years. Our selected terms capture specific policy mechanisms or tools within *policy areas*, not general descriptions of housing, which would create a sample beyond the scope of this paper.

We followed an established approach to analyzing social media data on political content (Stieglitz and Dang-Xuan 2013, 1288), applying inductive and deductive methods to create a dictionary of 41 keywords core to the *policy areas* (see APPENDIX). First, we sifted through policy documents, advocacy reports, news media, recent literature reviews, and online behavior to generate an initially larger set of keywords that indicated discussion.<sup>10</sup> These keywords

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<sup>9</sup> For comprehensive works on US housing policy (Landis and McClure 2010; DeFilippis 2016; Schwartz 2021).

<sup>10</sup> Our keywords expand beyond recent literature reviews intersecting with pro-supply and anti-development: search criteria elsewhere included “Upzoning, downzoning, zoning change, zoning reform, land-use reform” (Freemark 2023, 13). We also examined HUD’s Policy Areas, but many of these programs were excluded due to insubstantial public debate. See <https://www.hudexchange.info/programs/policy-areas/#rental-assistance>, Accessed 9/7/22.

include large policy programs like Section 8 and Low-Income Housing Tax Credit (LIHTC), and vernacular terms like NIMBY. Next, we ran the keywords through Twitter’s API count function, which has the capability to either pull all data tied to a tweet containing a keyword (or set of keywords) or generate a daily count of the number of tweets containing that keyword. We eliminated keywords from the list that were either too broad (i.e. they generated counts that overwhelmed the sample and captured debates that were difficult to attach to a specific *policy area*, like “affordable housing”) or too specific. We used 5,000 tweets as the cut-off for a term deemed too specific or marginal, like “minimum height requirements.” In some instances, we developed word pairings, like “eviction moratorium” instead of “eviction” alone, to create more relevant searches.<sup>11</sup>

We then applied a script written in Python using Twarc2 to query tweets using these terms on Twitter. We used three rules: tweets published (1) between 1 January 2015 and 31 March 2023 (2) in English, and (3) including one of the keywords.<sup>12</sup> We use 2015 as the start date because that is when Twitter reached 300 million unique monthly users and that number has plateaued since (reaching 330 million by 2019). The year 2015 also roughly matches the timing of the rise of housing movements, tenant movement organizations, and policy outcomes, each of which emerged out of the unequal economic recovery (Card 2022).

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<sup>11</sup> We also remove all non-text elements from the tweets, such as images and emotions that can be embedded in tweets, and delete common “stop words”— such as “and” or “very” — that contain little substantive information. Furthermore, we delete from each tweet all spaces ( ), hyphens (-), underscores ( \_ ) and quotation marks (“”), and covert to lower case, in order to reduce variation in language and create standardized dictionary matches. E.g. such that “anti-displacement”, “anti displacement” and “antidisplacement” would be captured by the token “antidisplacement.” One instance that appeared in our investigation was the hashtag ‘#bb22.’ The hashtag refers to the 22<sup>nd</sup> season of the reality television show Big Brother which uses the term ‘eviction’ when someone is eliminated from the competition. While the hashtag was sometimes tied back to housing issues as people criticized the use of the term ‘eviction’ in the midst of a real eviction crisis, the non-negligible volume of noise this use generated made the use of single keyword, like eviction, impractical.

<sup>12</sup> We began examining tweets also between 2010 to 2015, but these five years only made up 11% of all tweets, so we focused on the post-2015 period. 85% of relevant data for our research also followed 2015, illustrating the explosion of housing speech during this period.

Our selection rules ultimately generated a database of 13.5 million tweets scraped from Twitter. Twitter provides more than 70 variables associated with each tweet, but in analysis, we focus on six core variables: (1) the *text* the user posted (up to 280 characters), (2) the *date* and *time* the tweet was posted, (3) the *type* of the tweet (*original* content vs *retweet* or *quote*), (4) the *unique ID* of the user, (5) any full *URL* attached to the tweet, and (6) the information Twitter generated about the *contents of the text*. It is important to note that some tweets are scraped because keywords may appear in the full URL attached to the tweet, indicating that users are commenting on a linked page. We concatenate any such URLs with the main text in a tweet and employ this combined text variable in the analysis.

#### *Data Processing and Analysis*

Data cleaning and analysis followed three steps. First, we pre-processed each tweet and flagged which *policy area* had caused a tweet to be scraped by Twarc2. Next, we extracted the geographic information mentioned and linked this “place” information to a standardized coordinate reference system, enabling an analysis of how housing discourse varies when it is discussed in the context of different places. Finally, we generated summaries of the tweets’ content, examining trends and variation across time and place.

We rely on “place names” mentioned in tweets to develop a geotagged subset of housing discourse. Twitter automatically attempts to identify geographic places (“place names”) mentioned in tweets, and roughly 21% (2.9 million) of our scraped tweets contain mentions of such places. We linked place names to GeoNames, a freely accessible gazetteer that contains coordinate and geographic information for over 11 million place names worldwide. In creating matches, we prioritized matches both based on the population of the

place and on a set of rules designed to increase the likelihood of a successful match.<sup>13</sup> Finally, once we connected place names and coordinates, we linked geotagged tweets to the U.S. Census' cartographic boundary files for metropolitan statistical areas ("cities") and states.

It is important to emphasize that our geotags indicate *places mentioned* in the tweet and not *places situated when writing* tweets.<sup>14</sup> Discursive content serves as the primary object, as people produce political speech from varied places. For example, our dataset captures the universe of tweets discussing rent control in Los Angeles, whether the tweets originate in Los Angeles, New York, or London. Geocoding shows which places people communicate about while tweeting about rental policy, rather than where people tweet from.

We analyze our dataset to illustrate the total volume of tweets across *policy areas*, and how discussion evolved over time. Given that one-in-five tweets contained usable geographic information, we assume that our data is representative of the national distribution of tweets across MSAs and summarize metropolitan tweet volume to investigate differences across cities.

We also compared our analyses consisting of all tweets (including *derivative* tweets) to analyses consisting of only *original* tweets (tweets posted by a user rather than a user re-posting someone else's tweet). *Original* tweets illustrate unique comments, whereas *retweets* and *quote* tweets show amplification and resonance of conversations. When analyzing *original* tweets, we remove all tweets that have identical text in addition to dropping *retweets* and *quote* tweets. We do this because many tweets are generated from common sources like newspaper or blog articles that have a function to share the headline directly from the article, and eliminating such

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<sup>13</sup> For example, if "Paris" was mentioned in a tweet, we flagged this as "Paris, France" rather than "Paris, Texas" based on population. This strategy alone had a success rate of 87.2 in a random sample of 1000 tweets coded by the three authors. However, we also developed a set of custom decision rules (e.g. as forcing all mentions of "LA" to "Los Angeles, California" rather than "Louisiana") to solve other recurring errors.

<sup>14</sup> Tweets can also mention multiple places. When analyzing trends in a particular place, we analyze all unique tweets that mention a place at least once.



“standardized tweets” reduces the weight such sources have. By doing so, we hope to distinguish between *original* content and *derivative* tweets.

### *Interpreting the concentration of debate*

Policies deploy various tools to elicit response: sticks and carrots, rules and incentives, penalties and guidelines. Following calls to analyze agenda setting – or the process of informing, coordinating, and priming publics (Dickson and Scheve 2006, 10) at the intersection of governance and markets (Hacker et al. 2022) – we created a heuristic device to interpret our findings (*see* FIGURE 1).<sup>15</sup> The chart has two axes: (1) the *x-axis* aims to capture the spectrum to which policies utilize state intervention (on the left) or unrestricted market processes (on the right) (State-to-Market), and the second (*y-axis*) aims to capture the relative goal of “producing units” versus “protecting individuals” (Production-to-Protection). The four quadrants are labeled accordingly: (1) Market-Production, (2) State-Production, (3) State-Protection, and (4) Market-Protection; thus, the STATE MARKET PROTECTION PRODUCTION (STAMPP) CHART.

## **Findings**

### *The dominance of state-protectionist policy*

As the total volume of tweets between 2015-2023 demonstrate (see Table 2), regulation of *private rental* housing dominates online political speech with 4.2 million results, especially around keywords such as rent control, rent relief, rent freezes, and eviction preventions. The second most dominant *policy area* is *state-owned* rental housing, with 2.4 million tweets, with *fair housing* (2.3 million) trailing close behind. Whereas *subsidized rental* (1.8 million), *anti-*

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<sup>15</sup> None of our categories should be seen as absolutes, as “markets” are functionally embedded in government regulations (Polanyi 1944; Granovetter 1985) and other dimensions of culture, racism, sexism, transphobia etc.

*development* (1.4 million), and *pro-supply* (1.39 million), saw somewhat less activity. The trailing of *pro-supply* mechanisms is noteworthy, as recent policy discourse among elites (e.g. mayors, op-ed authors, and academics) has tended to focus on these market-based, housing unit productive interventions, like upzoning and density increases. The first overarching takeaway is that the top three major policy discussions fall in Quadrant 3: State-Protection, illustrating that most discourse concentrates around strong-state and tenant-protectionist policies (see FIGURE 1).<sup>16</sup>

### *The rental housing discursive field during Covid-19*

We periodized our data into three time periods: (1) pre-Covid-19 (2015 to March 2020), (2) peak-Covid-19 (March 2020 to March 2022), and (3) after peak-Covid-19 (March 2022 to March 2023).<sup>17</sup> The data show *policy areas* fluctuate in dominance over time (see TABLE 3.) We see significant increase in discourse including policy mechanisms to protect renters (*private rental*), against discrimination (*fair housing*), and smaller increases by NIMBY (*anti-development*) since 2015. *State-owned* dominated pre-pandemic – a surprising finding in itself, which warrants further investigation – yet, has continued to decline in relation to other themes. *Subsidized rental* declined during the peak-pandemic, but has recovered somewhat since then. Finally, *pro-supply* begins low, declines during pandemic, and recovers a little to overtake *subsidized housing* after peak-pandemic. The comparisons are relative to each other – in order to understand the entire spectrum and emphasis of the discursive field – despite debates among *policy areas* often taking place independent of the others.

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<sup>16</sup> We echo Hatch, who applies ‘protectionist’ to ‘states with mostly prorenter laws’ (2017, 106).

<sup>17</sup> While our data strongly correlate with Covid-19, we did not conduct a natural experiment to test whether Covid-19 caused discursive pivots. Other confounding factors exist, for instance, Trump discussing public housing in racist terms and the Black Lives Matter mobilizations in the Summer 2020.

The frequency of total activity (*original*, *retweets*, and *quote* tweets) doubled after the onset of the pandemic, with more than 8.4 million housing tweets registered during and after peak-Covid-19, as opposed to a total of 5 million tweets during the pre-Covid-19 period, despite that period covering three more years (*see* TABLE 4). Increased activity during peak-Covid-19 was likely attributable to people staying at home with more time to be online and tweeting, the passage of eviction moratoriums, and other conversations in the media around Black Lives Matter that contributed to increasing political engagement. The escalation of activity has been partially driven by *retweets*, as *original* tweets accounted for less than a third (29%) of housing tweets during peak-Covid-19. Our data also demonstrates escalating and sustained attention to housing after peak-Covid-19. The total volume of tweets after peak-Covid-19 (2.7 million) is on par with the yearly rate during the peak of the pandemic when economic and housing uncertainty were most acute. *Original* tweets as a percentage have risen in the last year to 45% of total housing tweets. Finally, Covid-19 also correlates with growing housing speech about places outside of the US, as discussions of US places online have become slightly less dominant compared to tweets about non-US places.

We visualize the growth of the discursive field on rental housing policy as two streams in relation to Covid-19, by tweets-per month (*see* FIGURE 2). Stream plots illustrate change in absolute magnitude (*i.e.*, count) and relative magnitude of *policy areas* in relation to one another. The top panel (Panel A) highlights the significant growth in activity on Twitter. Until 2018, overall activity was moderate, tens of thousands of tweets every month across all *policy area*, with no area clearly dominating. The balanced nature of *policy areas* is reflected in Panel B, which only includes *original* tweets. Echoing Table 3, pre-Covid-19 *original* tweets balanced more equally among *policy areas*, hovering around 25,000 tweets-per-month, with the largest volume addressing *subsidized rental* (“vouchers” and “Section 8”) and *state-owned* (“public housing”), or the poorest and most housing insecure. During the onset of Covid-19,

housing speech blew up to nearly 110,000 *original* tweets being registered in March 2020 alone (a jump by 80,000). This peak was greatly amplified through derivative tweets (Panel A), inflating the number of tweets to over half a million in a month at the peak of activity. In peak Covid-19, *private rental* peaked a few times, and *fair housing* took up a much larger share than previously. After peak-Covid-19, discussions on protecting tenants against discrimination, eviction, rising rents, and displacement have increasingly become the dominant topics. The larger share of *original* tweets after peak-Covid 19 is clearly visible in the different magnitude of the peaks in Panels A and B. The moments of highest *original* tweet production post-peak Covid-19 are nearly as high as those during the peak. In Panel A, times of highest activity during peak Covid-19 dwarf all other spikes, reflecting the role of derivative tweets. Notably, the discursive field illustrates growth in *original* tweets after peak-Covid-19 (in comparison to pre-Covid-19), with somewhat larger activity overall in all tweets after Peak-Covid. The crisis resulted in an explosion of rental housing policy debate.

An overview of the top ten hashtags per six *policy areas* between 2015-2023 illustrates how anxieties about rent woes and pandemic-induced recession expanded housing debate (see FIGURE 3). The top three hashtags – #rentrelief, #evictionmoratorium and #covid19 – discussed *private rental* housing, indicating a very active and widespread public conversation, around the time that municipal, state, and federal governments intervened to freeze evictions and to mitigate the economic hardship on renters. The dominant hashtags in tweets among the *state-owned* or *subsidized rental policy areas* tended to focus on tax credits (#lihtc), vouchers (#section8) or housing generally (#publichousing or #affordablehousing). The spike in housing discourse waxed and waned, but was never completely reversed as the pandemic proceeded, as housing discourse has continued to exceed 60,000 per-month. In other words, our data reflected huge surges in online housing speech due to Covid-19 and the government's responses to Covid-19, demonstrated by the fact that three of the six most prominent hashtags were

#Covid19, #evictionmoratorium, and #rentrelief, with the latter significantly out performing all the other hashtags. Altogether, as of 2023, housing policy debate experienced a decisive shift on twitter: from a relatively small conversation focused on insecurity experienced by the most disadvantaged (i.e., Section 8 voucher recipients and public housing residents), towards a much larger discussion on regulating *private rental* markets and protecting renters generally from displacement and discrimination. Substantively, the most frequent hashtags reinforce that the significant and enduring shift in public discourse concentrated attention on *strong-state* and *tenant-protectionist* policy mechanisms, which occurred as a direct response to the crisis of Covid-19, even as the initial shock and policy responses to the pandemic dissipated.

#### *Geographical focus of housing discourse*

We also tracked the geographic focus of housing speech, counting the number of mentions (originating from anywhere in the country) of the twenty metropolitan statistical areas (MSA) with the greatest frequency of mention in our dataset (see TABLE 5. Geography influenced housing discourse in terms of (1) city size, (2) share of *original* versus *derivative* tweets, and (3) thematic differences across regions.

While city size plays a significant role in discursive output, results varied in important ways. Mentions of New York City overshadow those of all other US cities in discussions of housing, accounting for nearly as many tweets as the next ten most popular cities combined. Some metro areas like Portland, meanwhile, show greater presence than they would in a population ranking, while others, like Houston, are lower. Portland and Seattle – in states with active housing reform agendas – are topics of highly active housing debates. Metro areas in California are also mentioned unusually frequently. However, cities can also be catapulted into prominence following public events. For instance, Memphis appears on the list of most tweeted cities because it memorialized the 50<sup>th</sup> anniversary of the Memphis Sanitation Strike in 2018,

as well as the death of Martin Luther King Jr., leading to many public discussions of public housing in the city.

The share of *original* tweets also differs by cities mentioned. An unusually high percentage of tweets referring to San Jose (CA) are *original* tweets (49.4%), suggesting that tweets about Silicon Valley received fewer derivative tweets by other users and may not be engaging people beyond those directly concerned with the city. In contrast, highly nationalized cities – such as New York City and Washington DC – have *original* tweet percentages closer to 20%, indicating that discourse about such cities became amplified by a larger public. The contrast may suggest that places with an active local housing policy debate spark more *original* social media content, whereas cities like NYC and Washington serve as exemplars for national conversations about housing.

Significantly, the content of housing political discourse varies across the MSAs being discussed. Discussion of *private rental* market regulation is widespread, but associates most strongly with capital cities where legislators write and pass laws, such as Albany and Washington D.C. Speech on *state-owned* housing most often discusses cities with large public housing programs, such as Chicago, Miami and New York, and cities with relatively high poverty, such as Baltimore. *Pro-supply* debate associates heavily with Western cities, notably San Francisco, Portland, Denver, and Silicon Valley, and cities friendly to developers, like Dallas. Meanwhile, *anti-development* (NIMBY) speech tends to spatially mirror discussions of YIMBY topics, suggesting that the themes interact with each other in the same cities. Further research is necessary on how the discursive field affects policy and vice versa.

## **Conclusion**

This paper investigates the changing structure of rental housing policy debate in the US. Despite housing becoming one of the major political challenges of our time, triggered by two

recent global socioeconomic crises, we know fairly little about the broader processes or dynamics of housing politics – e.g., how people participate in making political claims – and their political ramification across levels of government. Battles rage over the governance of housing markets, punctuated by rising inequality and polarization. Elites consistently argue that the best policy solutions to soaring housing costs lie in increasing subsidies and supply. While these mechanisms may play a role to address market failure around housing, no silver bullet policy exists. Like other complex and urgent public policy challenges (e.g., climate change), housing requires a multi-pronged policy program that includes short-term interventions to protect the most vulnerable and long-term planning to equitably increase capacity. The results show that mass debates centered around *strong-state* and *renter-protectionist* interventions, implying that the subsidy and supply toolkit advocated by elected officials (e.g., mayors) may overlook a broader set of approaches.

We reveal the broader conversation about housing policy by measuring – for the first time – broad public discussion in the rental housing discursive field as captured by six policy areas. Our aim is to make visible a range of largely overlooked messages in and about politics, therein balancing the scales between conventionally powerful and disempowered voices. As communications scholars remind us, what the public talks or writes about matters. “The role of agenda-democratizing processes and institutions,” Carpenter writes, “is thus crucial to the study of democracy” (2023, 8.3). Arguably, people’s voices are even more important in housing policy and planning, fields that strive to increase participation. Understanding the shifting public conversation around housing will aid future interpretations of the long-term trajectory of housing politics in the United States. Our findings show the realignment of the discursive field of rental housing policy in times of crisis, but further investigation could deepen the understanding of the discursive field through sentiment, network, and survey analyses.

Social scientists focusing on new media suggest that “institutional authorities hold less sway” (Bennett 2017, 10) in online political arenas. We find that housing speech shifted on Twitter from a smaller discussion addressing public and subsidized housing, towards a significantly larger discussion on protecting tenants from eviction, increasing rents, and discrimination. Crisis drove significant discursive shifts, involving an explosion of attention to policy mechanisms utilizing *strong-state* intervention and *protections-for-tenants*, as opposed to ones relying on the free market or production of new units (mentions of these policy tools did increase, but the rises were comparatively less significant).

“Policy regimes,” suggest Hacker *et al.*, “are formed and reformed through multiple rounds of contestation across multiple sites of political activity” (2021, 7). Institutions – such as political parties, grassroots coalitions, public policy, and elite agendas – often realign gradually across venues and time. The discursive field of rental housing policy since Covid-19 demonstrates a seismic, dramatic, and fairly rapid transformation around *state-interventionist* and *tenant-protectionist* policy. To the extent that public discussion could forecast policy attention, it appears a housing policy agenda realignment – centering the most vulnerable tenants – may be underway. Our findings do not interpret whether users supported or opposed a specific policy, nor should they be interpreted as replacing surveys or natural experiments. Constructing the discursive field can complement other approaches. Nonetheless, the concentration of discourse around *strong-state* and *tenant-protectionist* tools suggests the need for more research on the political dynamics, policy, and outcomes of often-overlooked dimensions of rental housing, especially regarding renewed discussion of public housing, preventing discrimination, and renter protections.

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## Tables and Figures

Table 1. Major Policy Areas of Rental Housing

POLICY AREA	OWNERSHIP	PROBLEM	SOLUTION	EXAMPLES
<b>PRIVATE RENTAL</b>	Private	Prices too high; eviction too easy; tenant precarity	Regulate landlord-tenant interactions	Rent stabilization/control; just cause eviction

<b>SUBSIDIZED RENTAL</b>		Prices too high; limited number of affordable units	Subsidize tenants or development of affordable housing units (non-state ownership)	Section 8; LIHTC; Inclusionary; Housing Trust Fund
<b>STATE-OWNED</b>	State	Private market fails to adequately house people	State build, manage, and maintain housing stock	Public housing
<b>PRO-SUPPLY</b>		Regulations too burdensome on developers; sprawling cities	Deregulate zoning and construction sector	Abolish single-family zoning; abolish minimum height restrictions, New Urbanism, missing middle, YIMBY
<b>ANTI-DEVELOPMENT</b>	Private or State	Development changing neighborhood character and creating gentrification	Stall and stop development	NIMBY; exclusionary zoning; anti-gentrification
<b>FAIR HOUSING</b>		Discrimination or inadequate zoning for housing	Fund compliant jurisdictions	Fair Housing; AFFH

**Table 2. Total Mentions of Rental Housing Policy Areas, 2015-2023**

<b>POLICY AREA</b>	<b>QUANTITY*</b>
PRIVATE RENTAL	4,225,990
SUBSIDIZED RENTAL	1,827,622
STATE OWNED	2,468,999
FAIR HOUSING	2,357,499
PRO-SUPPLY	1,391,732
ANTI-DEVELOPMENT	1,431,595
<b>TOTAL TWEETS</b>	<b>13,537,953</b>

\*Tweets can reference multiple policy areas. The total number of mentions surpasses the total number of tweets.

**TABLE 3. POLICY AREAS MENTIONED BY TIME PERIOD, 2015-2023**

<b>POLICY AREA</b>	<b>TIME PERIOD</b>		
	Pre-Covid-19 (%)	Peak-Covid-19 (%)	After Peak-Covid-19 (%)
PRIVATE RENTAL	16.0	48.0	24.0
SUBSIDIZED RENTAL	19.7	8.4	12.8
STATE-OWNED	23.0	17.0	14.0
FAIR HOUSING	18.0	14.0	23.0
PRO-SUPPLY	11.9	6.9	14.4
ANTI-DEVELOPMENT	11.0	8.0	16.0

(1) Pre-Covid-19 (2015 to March 2020), (2) Peak-Covid-19 (March 2020 to March 2022), and (3) After peak-Covid-19 (March 2022 to March 2023). The tweet counts are non-exclusive, meaning a single tweet can mention multiple

keywords and thus be counted twice among different policy areas. Therefore, total of proportionate percentage surpasses 100%.

**Table 4. Rental housing tweets: timing, quantity, source, and domestic/international**

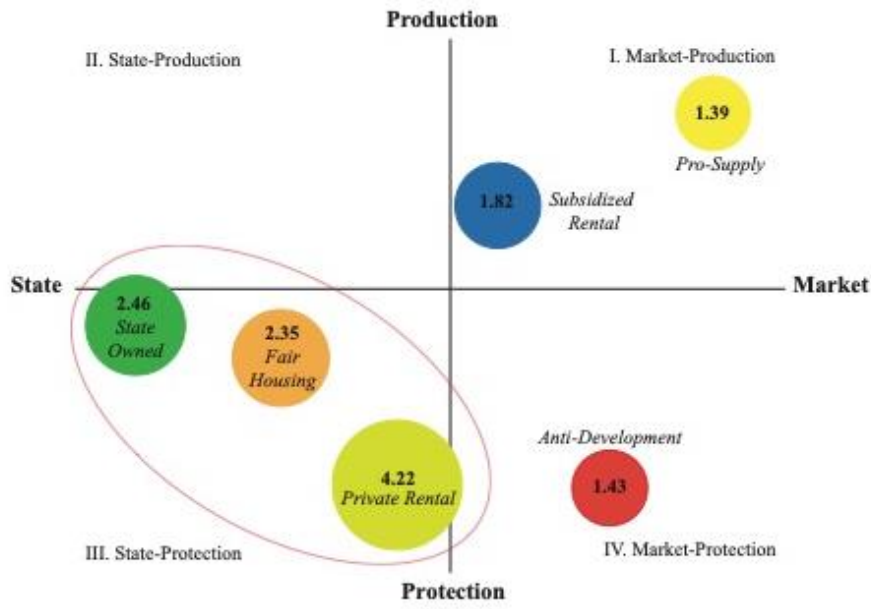
TIMING	QUANTITY	SOURCE (% original tweets)	Tweets about US	
			Tweets about US	Tweets about other countries
Pre-Covid-19	5,060,564	38	3.21	
Peak-Covid-19	5,750,431	29	3.80	
After peak-Covid-19	2,726,958	45	1.91	

**TABLE 5. TOP 20 METROPOLITAN REGIONS MENTIONED ON HOUSING TWITTER, 2015-2023**

METROPOLITAN REGIONS	TOTAL ACTIVITY		PERCENTAGE BY POLICY AREA						
	QUANTITY	ORIGINAL %	PR	SR	SO	PS	AD	FH	
New York-Newark-Jersey City, NY-NJ-PA	606203	21.2	16.1	24.0	25.4	7.5	4.3	2.7	
Washington-Arlington-Alexandria, DC-VA-MD-WV	168275	20.4	61.3	8.5	10.5	4.89	4.16	1.8	
Los Angeles-Long Beach-Anaheim, CA	120661	30.6	42.2	11.8	20.6	8.2	12.8	1.4	
San Francisco-Oakland-Hayward, CA	107140	35.7	32.6	10.4	10.6	20.58	24.66	7.1	
Chicago-Naperville-Elgin, IL-IN-WI	69649	35.5	17.0	10.4	34.0	8.4	9.2	2.0	
Boston-Cambridge-Newton, MA-NH	58699	34.2	46.6	8.7	14.3	11.65	8.21	1.0	
Seattle-Tacoma-Bellevue, WA	41841	35.2	39.2	9.9	10.5	17.3	18.7	6.4	
Memphis, TN-MS-AR	35279	4.2	2.5	1.4	92.4	0.97	0.62	2.0	
Houston-The Woodlands-Sugar Land, TX	33817	24.8	23.4	6.3	32.1	12.4	6.9	1.0	
Baltimore-Columbia-Towson, MD	32866	36.7	6.5	18.6	46.7	8.54	6.63	1.0	
Minneapolis-St. Paul-Bloomington, MN-WI	32574	30.0	37.0	11.8	20.0	11.5	15.5	8.0	
Miami-Fort Lauderdale-West Palm Beach, FL	27251	31.0	22.9	9.1	37.9	13.03	5.85	6.0	
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	21690	41.1	19.8	12.4	25.9	16.9	13.9	1.0	
Atlanta-Sandy Springs-Roswell, GA	20286	37.1	13.8	27.9	23.6	14.70	9.65	2.0	
Denver-Aurora-Lakewood, CO	19412	41.1	31.4	13.6	12.6	20.8	11.2	1.0	
Portland-Vancouver-Hillsboro, OR-WA	19009	41.8	35.8	9.0	9.4	25.42	16.90	8.0	
Albany-Schenectady-Troy, NY	18366	31.7	68.7	4.4	14.4	6.1	2.8	6.0	
San Jose-Sunnyvale-Santa Clara, CA	18228	49.4	32.5	9.2	2.6	23.72	29.39	5.0	
Dallas-Fort Worth-Arlington, TX	17930	38.5	11.3	17.4	6.3	35.5	18.8	1.0	
Columbus, OH	16786	41.8	17.0	18.3	18.0	15.20	8.34	2.0	

*Note:* “PR” refers to Private Rental tweets; “SR” refers to Subsidized Rental tweets; “SO” refers to State-Owned rental tweets; “PS” refers to Pro-Supply tweets; “AD” refers to Anti-Development tweets; “FH” refers to Fair Housing tweets.

Figure 1. STAMPP Chart: Mass Speech Clusters around State-Protectionist Policy\*



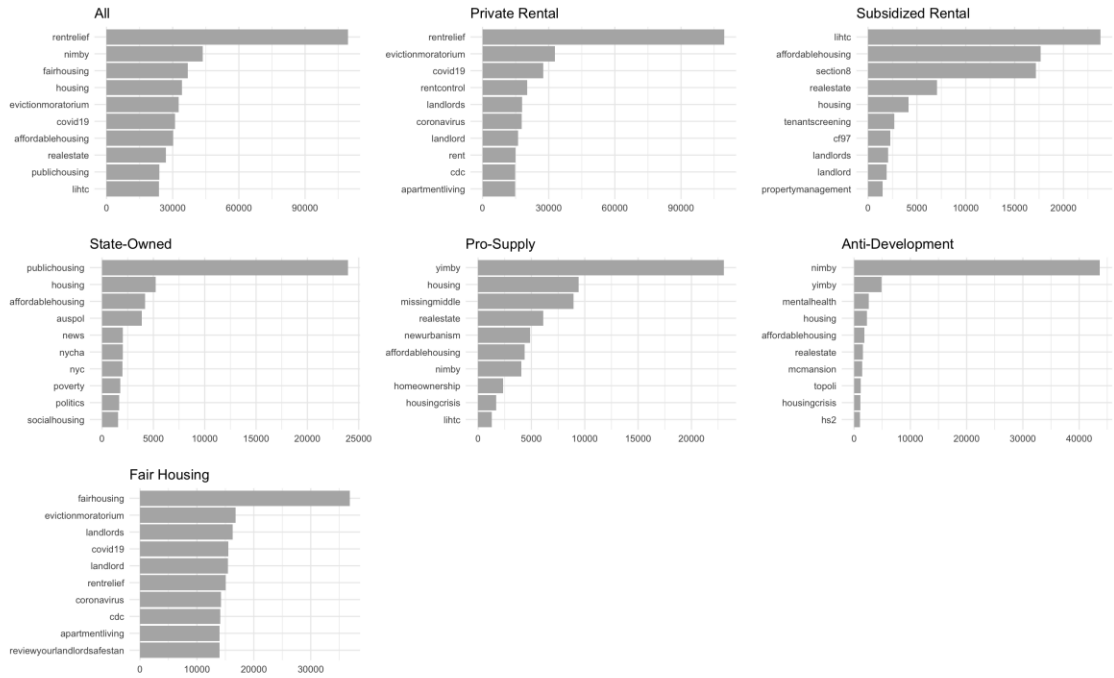
\*In millions of Tweets.

Figure 2. Tweets Rental Housing





Figure 3. Most Common Hashtags by Policy Area, 2015-2023



**APPENDIX**

**APPENDIX 1: 41 KEYWORDS ON RENTAL HOUSING POLICY MECHANISMS**

<b>PRIVATE RENTAL</b>		<b>SUBSIDIZED RENTAL</b>		<b>STATE-OWNED</b>	
Rent regulation	44,163	Section8	1,345,450	Public housing	2,463,082
Rent regulations	18,934	Housing voucher	83,683	Hope VI	6,678
Rent control	1,241,352	LITHC	89,233	STATE RENTAL TOTAL	2,468,999
Rent stabilization	84,156	Subsidized housing	271,697		
Rent cap	68,889	Housing trust fund	51,957		
Rent relief	868,002	Inclusionary zoning	10,548		
Rent freeze	471,508	inclusion	15,718		
Just cause eviction	13,992	SUBSIDIZED RENTAL	1,868,286		
Good cause eviction	46,917	TOTAL			
Anti-displacement	25,651				
Eviction freeze	26,798				
Rent moratorium	69,786				
Eviction moratorium	1,439,447				
PRIVATE RENTAL TOTAL	4,225,990				
<b>FAIR HOUSING</b>		<b>PRO-SUPPLY</b>		<b>ANTI-DEVELOPMENT</b>	
Fair housing	754,802	Yes in my back yard	16,818	Not in my backyard	107,570
AFFH	577,921	YIMBY	559,029	NIMBY	922,314
Affirmatively furthering fair housing	25,785	New urbanism	114,528	Exclusionary zoning	78,945
Housing discrimination	74,8472	Missing middle	168,009	Anti-gentrification	59,190
Landlord harassment, cockroach, rats, mold	375,274	Housing supply	73,302	McMansion	295,138
FAIR HOUSING TOTAL	2,357,499	Zoning reform/deregulation	453,551	McMansions	110,554
		Housing reform/ deregulation	44,988	Neighborhood change	6,065
		PRO-SUPPLY TOTAL	1,430,225	ANTI-DEVELOPMENT TOTAL	1,431,595

Note: keywords like zoning reform/deregulation were run as separate pair and combined here for simplicity. The API routine removes all punctuation and capitalization. Tweets can reference multiple policy areas. The total number of mentions surpasses the total number of tweets.