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Data debates in urban development: The data politics of facts and counter-facts

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Abstract

Data relating to urban development are often accepted and used at face value, treated as impartial, objective, incontrovertible facts. However, the validity and veracity of official datasets can be challenged, with a data debate forming between actors, which might include the provision of alternative datasets and counter-facts. Such data debates can be significant as they undermine confidence and trust in datasets, which in turn can have knowledge, policy, market and political effects. This paper examines the nature of such data debates by examining two long-running disputes in Ireland concerning the veracity of residential vacancy and housing completions data.

Key words: data debates, housing data, vacancy, housing completions, data politics, data quality

“The Government’s most basic dataset is a fiction, and yet it is what it is basing its housing policy on. ... There are toddlers out there more accurately counting their toys than the Government is able to count homes.” (Mullally 2017)

“How can there be any credibility around housing targets if there is no confidence around the statistics underlying them? ... The starting point for any policy prescription should be accurate and reliable statistics. In Ireland’s most pressing policy area, it appears we don’t have this basic requirement.” (O’Leary 2017)

Introduction

Housing, property and planning data, particularly official, quantitative data generated by state agencies, are a key resource for understanding and managing urban development. They provide the evidence base that informs spatial planning and housing policies, shapes public perception, and guides billions of euros of investment relating to land use, developments, and infrastructure. Such data are most often treated as facts; valid, incontrovertible, objective, reliable, impartial pieces of data that reveal truths about the world (Poovey, 1998; Shepard, 2022). However, as challenges to the veracity and utility of data in multiple jurisdictions reveal, the claims to truth and objectivity of urban development data are contested, with some questioning the validity of measurement methods and the fidelity and quality of the generated data (Marquardt, 2016; Loukissis, 2019; Markley and Drogaris, in press) and the selection of what is measured and whose interests it serves (Daniel and Pettit, 2021; Harten et al., 2021; McElroy, 2023). In some cases, such critique is accompanied by the provision of alternative datasets and counter-facts (Meng and DiSalvo, 2018; Maharawal and McElroy, 2018; St-Hilaire et al., 2024).

Critique and challenges to a prevalent data regime can result in a data debate, defined here as an *exchange of contrasting views* concerning how to measure a phenomenon and the veracity, validity, and use of the data produced. In effect, it is a debate *about data*, not a debate that uses data as evidence to make a particular point or case. In other words, data is the object of scrutiny and the focus of argument. In general, the debate is conducted by actors who share a view that producing and analysing data is an essential means of understanding and explaining aspects of the world, but have differing views about how that is best achieved. In more meta-level data debates, data as a legitimate form of knowledge might be questioned as part of a more general critique of science and an evidence-based approach to policy (Edwards, 2010). Data debates are important because they can have substantive consequences for how we understand and act in the world, having:

- *knowledge effects*, undermining confidence in analysis and conclusions;

- *policy effects*, casting doubt on the evidence-base for policy choices and decisions, and undermining data policy and data strategies in local government and state agencies;
- *market effects*, making actors hesitant and cautious to invest;
- *political effects*, used to challenge government policy and persuade voters.

Yet, data debates in general – why they occur and their nature – and specifically with respect to urban development have, to date, received scant academic attention. That is not to say the core focus of a debate, such as data quality, is little assessed, or that evaluations of the relative validity and worth of data are lacking (e.g., Stokes and O’Callaghan, 2021; Immergluck and Hollis, 2023) but rather that these studies are participating in a debate as opposed to *examining the debate itself* and its drivers, nature and consequences.

This paper seeks to address this lacunae by empirically examining two long-standing data debates in Ireland relating to residential vacancy and housing completions. These two data debates involve actors that agree that evidence is a vital resource for guiding responses to societal issues, and therefore the analysis does not extend to the meta-level. What is demonstrated is that the foundations and terms of data debates are not just methodological, centred on measurement and data quality issues, but are also rooted in data politics and the intended purpose in generating and using datasets, as well as the cultural values, beliefs, experience, knowledge and affective response of data users, and the extent to which they trust data producers and their data. Consequently, resolving a data debate is not simply a question of finding a technical fix to a flawed process, or providing a counter dataset. Instead, it requires a negotiated, shared understanding and proposed solution to an issue that satisfies all, or more realistically most, parties. Such a shared understanding is often difficult to achieve in practice due to differing perspectives and vested interests; nonetheless, the process of seeking consensus is still a productive exercise as it creates critical reflection and shared learning that informs on-going data practices and future orientations to the constitution of data regimes.

Making sense of urban development data debates

Debate is the process by which positions ‘about an issue are advanced, supported, disputed and defended’ and a resolution to a divergence of opinion is sought (Branham, 1992: 1). For each debate there is an initial catalyst that leads one party to challenge the position or work of another. In the case of a data debate, such a catalyst might include: (1) an assessment that

data quality is weak (suffering with issues related to fidelity, accuracy, precision, bias, representativeness, completeness, consistency, reliability) or the data are not fit for purpose for the intended task (Gabrys et al., 2016); (2) a suspicion that the data have been invented, falsified or gamed data in order to create a particular impression (Harten et al., 2021; Deschamps, 2022); (3) a complementary dataset is found that provides conflicting evidence about the same measured phenomenon (Stokes and O’Callaghan, 2021); (4) a perception that institutional and political agendas are overly shaping what data are generated (and what silences and gaps exist), and that the data are designed to serve particular interests (Kitchin, 2022); and (5) negative affective engagements with data, such as gut-feelings and intuition that makes an analyst ‘sense’ that something does not ‘feel right’ based on their knowledge of an issue and their prior experience with an earlier version of the same or similar datasets (Lupton, 2020).

These catalyst factors reflect the contingency and politics inherent in the production of data; that data are never ‘raw’, but are always ‘cooked’ to some recipe and for some purpose (Gitelman and Jackson, 2013). What and how data are generated are shaped by choices and decisions informed by epistemological positions, institutional agendas and ideological commitments (Markham, 2017), and data are designed to perform certain functions for particular ends (Ruppert et al., 2017). Facts then are never simply pre-given truths collected through neutral, objective measurement, but are constitutive of the ideas, techniques, protocols and standards, instruments and technologies, data architecture and systems, organisational processes, people and contexts that generate them (Bowker and Star, 1999; Kitchin, 2022). Facts are socio-technical constructs that are open to imprecision, error, bias, and manipulation, and therefore challenge and contestation (Shepard, 2022).

Moreover, how data are understood and assessed is not simply performed from a rational, objective perspective, grounded in episteme (scientific knowledge) and *teche* (practical instrumental knowledge). Rather, context and personal perspectives, informed by other forms of knowledge, such as *phronesis* (knowledge derived from practice and deliberation) and *metis* (knowledge based on experience), also shape how data are perceived and valued (Kitchin, 2022). Indeed, property and planning analysts and market actors usually possess a wealth of *phronesis* and *metis* that, when confronted with data that presents a different picture to their grounded experience, can spark feelings of unease or bewilderment and seed a sense of distrust in a dataset. Further, as Fiore-Gartland and Neff (2015) note, individuals and groups can hold differing data valences, meaning how they understand and value data differ due to contrasting knowledge and expectations regarding why data are

produced, what insights they enable, and how they are employed and for what ends. For example, how state officials, landlords, banks, and civic organisations (such as a tenants union) value, make sense of, and use rental and tenant data are quite different. That is not to say that consensus with respect to data veracity is not possible (and some datasets are highly trusted across stakeholders); however, the socio-technical nature of data and their associated data politics and data valences do make some data debates somewhat inevitable. Such debates do not necessarily gain a public audience as they are conducted in private or do not attract the media's attention. In other cases, especially when enrolled into wider political rhetoric, they play out through social media and mainstream news, as has been the case of the data debates examined in this paper.

Barnham (1992) contends that a 'true' debate (one where participants engage with each other's arguments, rather than simply reiterating their positions) has four characteristics: *development*, in which opinions are advanced, supported by reasoning and evidence; *clash*, through which arguments are compared and disputed; *extension*, through which responses are made to points made in the clash, thus extending and elaborating an argument; and *perspective*, in which arguments are related to the wider issue at hand (in this case, delivering housing). In making a case and refuting counter-arguments, various forms of rhetoric and evidence are employed to try to persuade other parties to alter their opinions and actions, and to influence the views of other vested third parties and the wider public. Data debates are often empirical in nature, supported by evidence such as a measured aspect of data quality or some form of counter-data, rather than dominated by normative or moral rhetoric that is rooted in personal judgement and values, though these can be mobilised in a debate, especially when it appears a dataset is being manipulated to serve a political agenda.

When confronted with critique, a data producer has four potential responses with respect to resolution: capitulation, compromise, consensus, and contestation (Ehninger and Brockriede, 2008). *Capitulation* acknowledges the critique as being valid and seeks to fix it; for example, apologising, withdrawing the data, researching and correcting the issue, validating the new methodology and data, and then republishing the dataset. Through *compromise* the contending parties sacrifice part of their original claim and modify their position in order to produce a mutually acceptable position, though no party is likely to be fully satisfied with the outcome. *Consensus* consists of seeking a position that addresses the issue and which everyone accepts without reservation. In *contestation*, a data producer refutes any accusations and defends their data and methodological approach, taking no action until persuaded to do so, or is told to do so through the intervention of a third party (such as an

oversight body). Here, either a deliberative discussion is adopted that explores an issue through conversation and exchange, or a dialectic form of questioning is adopted that seeks to undermine the position of others and persuade them to change their view (Ehninger and Brockriede, 2008). How a dialectic data debate unfolds can be professional and polite, but can also become personal and vitriolic using emotive language or inflammatory accusations, particularly if conducted on social media. One tactic used by data producers to defend and try to close off a debate is to construct what Lawson (2022) terms ‘data bounds’; that is, use a call to authority (such as state power and expertise) to place a legitimating boundary around how a phenomenon can be measured and how specific sets of data can be rightfully understood (rendering other datasets and narratives suspect). Even when a data producer agrees privately that there are issues, they might not act due to fear of losing face or experiencing some other negative outcome. If the data producer refuses to address the issue, then it is up to the party making the complaint as to whether they accept the data producer’s defence, or whether they want to continue to debate the issue or adopt an alternative response such as producing counter-data (and potentially accept any consequence that might arise from doing so, such as losing state funding).

In this paper, the unfolding of two housing data debates are charted. The empirical research was part of a larger project investigating the property and planning data ecosystem in Ireland, with the analysis drawing from two bodies of source material. The first is a set of 125 recorded interviews (38 state; 36 business; 22 civil society; 29 academic) with 135 key actors who worked for 78 organisations (23 state; 29 business; 16 civil society; 10 academic). The organisations were selected after conducting an audit of entities that produced and shared/sold property and planning data, or were key consumers of such data whom generated secondary outputs (e.g., analytics, reports) that were widely shared. Interviewees were recruited through purposeful (their role and expertise regarding the management of data within an organisation) and referral (suggested by earlier interviewees) sampling. The interviews were semi-structured in format, following a guide of open questions, and were conversational in nature, diverging from the guide to ask follow-up questions or pursue interesting points as they arose. The interviews focused on the respondents’ knowledge of the property and planning data ecosystem, issues such as data availability, gaps, silences, quality, fit-for-purpose, maintenance and repair, their organisations’ data holdings and data usage, and their own data work, experiences and views. This fieldwork was complemented by desk-based research examining policy documents and performing a systematic search of news media for stories relating to the evidence base of property/planning, particularly focusing on

the archive of the *Irish Times* (widely considered the paper of record for Ireland). In total, 138 newspaper stories were sourced between the years of 2007 and 2025. All of the interviews were transcribed and coded using MaxQDA to identify themes and issues, and the media stories were sorted and coded by theme within Word.

In total, 16 separate data debates were identified in which one or more individuals contested the veracity and validity of published data (related to issues such as homelessness, housing need and targets, social housing delivery, number of rental properties, unfinished estates, dereliction, planning permissions, building commencements, cost of construction, and affordability). Here, the analysis is restricted to residential vacancy and housing completions, selected because they are both long-running debates (>15 years) and both have involved the use of multiple counter-datasets (in total, 11 data sources have been used in the vacancy debate and 7 data sources in the completions debate). Official vacancy data are directly captured by a person visiting the site, with counter-data provided via proxies, crowdsourcing, validation visits, and administrative registers. Official housing completions data are sourced using a proxy measure, with counter-data provided via an administrative register and other proxies.

Housing data debates in Ireland

Residential vacancy

The residential vacancy data debate in Ireland has been on-going since January 2010, stemming from an analysis, post the financial crash of 2007-08, of potential oversupply of housing stock. This analysis used the 2006 census as its base data. Prior to 2010, the census vacancy rates were discussed in the media, but their veracity was not contested (e.g., Gartland, 2007). The April 2006 census reported that there were 266,322 units vacant (15% of stock), of which 49,789 were classed as holiday homes. Prior to the financial crisis, Ireland was experiencing a housing construction boom with record levels of development. By 2009 house prices had fallen markedly and the phenomenon of ‘ghost’ estates (stalled, unfinished developments) was widespread (Kitchin et al., 2012). Yet, between January 2006 to June 2009, 237,449 housing completions were recorded, the run-out of the construction boom, with units being added to a housing stock marked by high levels of vacancy and little market demand.

Using completions data, along with Geodirectory (the national address database), NIRSA (National Institute for Regional and Spatial Analysis) projected forward the 2006 census data, estimating that 302,625 properties (excluding holiday homes) were vacant by

late 2009 (Gleeson and Kitchin, 2010a). In a subsequent analysis, they estimated the oversupply above a base (expected) vacancy rate of 6 percent to be 121,777 units (Gleeson and Kitchin, 2010b). This analysis was quickly picked up in the media and challenged as to its veracity (Hennessey, 2010), especially since it seemed to deviate from the Department of Environment, Heritage and Local Government's (DEHLG)¹ own calculations produced by the consultancy firm, DKM (2009). The analysis was soon followed by vacancy and oversupply estimates by Goodbody (an investment firm) (Hennessey, 2010) and University College Dublin (UCD) researchers (Williams et al., 2010) (see Table 1).

Table 1: Estimated and measured housing vacancy rates, 2009-2011

	<i>Vacancy (inc. holiday homes)</i>	<i>Holiday homes</i>	<i>Vacancy (exc. holiday homes)</i>	<i>Base vacancy</i>	<i>Obsolescence (2006-2009)</i>	<i>Potential oversupply</i>
DKM/DEHLG, Sept, 2009	301,682-326,685	73,476	228,206-253,209	106,177	-	122,029-147,032
NIRSA¹, Jan 18 2010 Jan 24 2010	352,414 338,031	49,789 86,002	302,625 252,029	106,177 87,356	- 44,425	121,777 120,248
Goodbody, Jan, 2010	302,475-343,480	73,000	229,475-270,480	126,189	-	103,286-144,291
UCD, March, 2010	345,116	64,520	280,596	98,980	9,898	171,178
Census, Apr, 2011	289,451	59,395	230,056	119,661	-	110,365

1. NIRSA employed two different methods in its analysis, refining its calculation when estimating oversupply by revising holiday home estimates and calculations for base vacancy and including estimated obsolescence between 2006 and 2009.

The debate at this time was partially due to confusion caused by conflating vacancy and oversupply. For example, the DKM estimate of 122,029-147,032 units of oversupply was contrasted with the NIRSA vacancy estimate of 302,625 units. However, the estimates of vacancy and oversupply across actors were broadly in alignment, with all estimates calculating vacancy including holiday homes to be above 300K, vacancy excluding holiday homes in excess of 228K, and potential oversupply to be over 103K. The variance between the estimates was due to three factors: method, data sources and assumptions. All the studies used the Census 2006 as their starting point, and also used data on housing completions and new mortgages on new homes, to calculate vacancy excluding holiday homes to the end of 2009. With respect to calculating oversupply, DKM and Goodbody also incorporated an estimate of properties bought without a mortgage; NIRSA and UCD used household projections, holiday home demand, and obsolescence. All four organisations used slightly

different assumptions with respect to holiday home rates, obsolescence rates, how many houses were bought without a mortgage, how many newly bought houses were occupied, and expected underlying base vacancy rate (e.g., with regards to the latter, UCD used 5%, DKM and NIRSA 6%, and Goodbody's 7.3%).

The 2011 census largely confirmed the levels of vacancy estimated by these models reporting that 289,451 units were vacant (14.5% of stock), 59,395 of which were classed as holiday homes (CSO, 2012). Oversupply was 110,365 units (on top of a 5% base vacancy of 119,691), plus 17,872 units under-construction on unfinished estates (Kitchin, 2012). These census figures were, like the 2006 figures, largely uncontested since they were not estimates but measured data. There then followed a lull in the vacancy data debate, though the issue of vacancy itself increasingly gained prominence as the focus shifted from it being a measure of oversupply and a factor in the economic crash, to vacancy being seen as a solution to growing housing shortage and rising rents, house prices and homelessness caused by several years of very small numbers of housing completions and a growing population (Stokes and O'Callaghan, 2021). As Stokes and O'Callaghan (2021) detail, several policies relating to vacancy were introduced post-crash. This included the establishment of the National Assets Management Agency (2009) and the Long Term Leasing Initiative (2009) to help tackle oversupply. Later, to help tackle undersupply, the Vacant Site Register (2015), National Vacant Housing Reuse Strategy 2018-2021 (2017), Vacant Site Levy (2018), Repair and Leasing Scheme (2018), Buy and Renew Scheme (2018), Town Centre First (2018), Compulsory Purchase Order (CPO) Programme for Vacant Homes (2020), Voids Stimulus Funding (2020), Vacant Property Refurbishment Grant (2022), the Vacant Homes Action Plan 2023-2026 (2022), and Vacant Homes Tax (2023). To manage and oversee these policies, local authorities employed vacant homes officers and the Department of Housing, Planning and Local Government (DHPLG¹) established a Vacant Homes Unit (2017). These policies required an evidence base to guide their implementation and monitoring.

Disquiet with the census as a source of vacancy data began to surface in earnest with the publication of the 2016 census. The nub of the issue was twofold. First, the April 2016 census vacancy figures (183,312 units, plus 62,148 holiday homes) differed substantially from other sources of vacancy data such as Geodirectory (96,000 units in June 2017) (McGee, 2017). Second, key actors did not believe the data based on their knowledge and experience of managing housing. For example, in Dublin, all four local authorities felt sufficiently troubled with the census data that they undertook validation studies. Each local authority claimed that vacancy in their jurisdiction was substantially below that reported by

the census and Geodirectory (McGee, 2017; Holland, 2018). The census had reported that 31,459 units were vacant in Dublin in 2016 (CSO, 2017), however based on desk-based research and visiting a sample of properties, Dún Laoghaire Rathdown County Council estimated that only 77 houses out of the 4,596 properties identified by the census, and the 2,023 properties identified by Geodirectory, were vacant (Holland, 2018). Similarly, South Dublin estimated that around 250 units were vacant (3,495 in census) and Fingal that 64 units were vacant (4,944 in census) (Holland, 2018). Based on these validation studies, the DHPLG claimed that only 900-1000 residential properties (1/30th of the census rate) were vacant in Dublin (Holland, 2018). Given the critique, the CSO published a special note on its vacancy calculations (CSO n.d.) and defended its vacancy statistics in the media stating that it was confident its “vacant dwelling figures are robust as a point-in-time record around the 24th of April 2016” (McGee, 2017).

In response to the validation studies, the DHPLG, as part of its Rebuilding Ireland strategy, adopted vacanthomes.ie (first created by Mayo County Council in 2017) as a means for the public to report properties they considered vacant (Stokes and O’Callaghan, 2021). The vacant sites register and derelict sites register have also been used as sources for vacancy numbers. In addition to state and commercial sources of vacancy data, other initiatives have been undertaken to measure vacancy at a local level (see Stokes and O’Callaghan, 2021). The Town Centre Health Check has undertaken residential and commercial vacancy audits of a number of selected towns. Reusing Dublin, a collaboration between the social enterprise, Space Engagers, and the housing trust, Peter McVerry Trust, was a crowdsourcing initiative that ran between 2017 and 2019 where the public could report vacant units.

For the 2022 census, the CSO refined how vacant units are recorded. Enumerators were required to verify the reason why a property was vacant, principally determined through enquiries with neighbours. Enumerators were asked to allocate a vacant property to one or more category: rental property; renovation; living with relatives; deceased and in probate or not sold yet; residing in a nursing home; for sale; emigrated; new build not yet occupied; farmhouse; other reason/not stated. Nonetheless, the vacancy data issue resurfaced after the publication of the census results, in part because opposition politicians and others used the overall vacancy rate – 163,433 (plus 66,956 holiday homes) – for political capital, rather than using the rates for different categories of property (thus suggesting that far more property was potentially available to solve the housing supply issue than was the case) (see O’Callaghan et al., in press), and in part because there were doubts about the veracity of some classes of vacancy. For example, few market actors believed there were 8,575 rental properties vacant

in the four Dublin local authorities (CSO 2023a) given demand for, and the known shortfall of, rental properties in the city.

Also in 2023, the Revenue Commissioners, using electricity consumption data, identified just 25,000 properties that might be liable for the Vacant Homes Tax, which applies if a property is occupied for less than 30 days per annum (Bowers, 2023). However, after exemptions, less than 3,000 properties were deemed liable for the tax (Burke-Kennedy, 2023). The CSO (2023b) also piloted a potential new official statistic that measured vacancy based on metered electricity consumption data, with a property deemed vacant if less than 180kwh of electricity consumption was used for at least four consecutive quarters. However, the published data only presents the rate of vacancy not the number of units. The national rate for Q4 2021 was 4.3%, while the rate in Census 2022 was 7.7%. This new measure has been adopted as an official statistics in 2025.

The key factors differentiating these various data sources is what is meant by vacancy and the mode of measurement. As one interviewee stated:

“definitions of vacancy can be quite fluid, and I think there’s often presumptions around an aesthetic, and that’s where the line between vacant and derelict kind of is a scale. But to think of something as vacant, people might have an imaginary of it being perfectly intact and ready to be taken, you know, to be occupied, but it’s oftentimes not that.” (IP97, academic)

In the census, a property was classified vacant if it was deemed habitable but empty on the multiple occasions that an enumerator visited. It also excluded those properties where a form was returned but the occupant was away on census night (e.g., on holiday or a work trip). For Geodirectory, vacancy is recorded by An Post workers who deliver mail and is based on whether they see occupants and patterns in the mail received. In the case of Fingal’s ‘Vacant Homes Identification Project’, a street survey of aesthetic factors such as overgrown grass, peeling paint and property damage, along with leafleting properties and contacting management companies and resident associations, was used to identify vacant units (Stokes and O’Callaghan, 2021). For the Revenue Commissioners and the new CSO official statistic, vacancy is indicated by the consumption of electricity within a housing unit. The benefit of the census, Geodirectory and the new official statistic is that there is national data coverage, whereas local authority surveys or town health checks are localised. In terms of timeliness, the census is once every 5 years and the results are published 12-18 months after collection;

local authority studies are once-off surveys. In contrast, Geodirectory and the new CSO occupancy data is continuous and updated quarterly. However, Geodirectory do not publish the exact method they use to capture and report vacancy rates, undermining confidence in it as a source. As one of our interviewees stated:

“I think it’s pretty apparent from anyone who looks closely at the Geodirectory data, there’s no metadata, there’s no methodology. It really doesn’t stand up ... [O]ur boots on the ground surveys that have been undertaken as part of Town Centre First with the vacant homes officers and the town regeneration officers in these various towns ... show that probably less than half the Geodirectory recorded vacant buildings are actually vacant when you go out on site.” (IP159, state worker)

All the uncertainty regarding the various sources of vacancy data leaves many actors circumspect about the data and the narratives built upon it. For example, another interviewee stated:

“So when people say, ‘This is a disgrace, we’ve got all this vacancy,’ I’d be saying, ‘Look: you can’t rely on that data, first and foremost.’” (IP83, private sector worker)

Indeed, the only consensus that seems to exist with respect to residential vacancy in Ireland is that its actual rate is unknown.

Housing completions

Concerns relating to the fidelity and veracity of housing completions data have been on-going for over 15 years. For example, in January 2010, the economist, Pat McArdle, wrote in the Irish Times:

“[W]e rely on ESB connections for our estimate of new housing completions. This can have occasionally hilarious consequences, such as the time a few years ago when the ESB got their manpower allocations wrong, built up a huge backlog and were unable to supply connections data for half a year. It also means that the annual figures are dubious because some new houses are not connected and others are connected long before they are finished” (McArdle, 2010).

At the heart of the debate is the use of ESB Networks (Electricity Supply Board) figures for new connections to the electricity grid. As McArdle intimates, ESB connections are a proxy for completion, with the logic being, as a new build becomes ready for occupancy it is connected to the electricity supply. However, houses might be connected well before being completed and others might be complete but not connected because there is a lack of market demand. In the case of the post-crash period, a weak market and unfinished estates (2,846 as documented by the 2010 National Housing Development Survey; Kitchin et al., 2014) led to concerns that a housing unit might be: (1) built and not connected to the electricity grid until years later, or (2) connected to the electricity grid, then disconnected as it remained unoccupied, to later be reconnected. In the first case, a property is counted far later than built, giving a false impression of construction activity, and in the second case, properties can be double-counted.

It was these two issues that resurfaced the completions data debate in 2015. In April of that year, the Society of Chartered Surveyors Ireland (SCSI) challenged DEHLG's 2014 completions figures, claiming that it was over-counting completions by about 20 per cent since it was counting housing constructed on unfinished estates in previous years. Its evidence for this was the marked disparity over a 3-year period between the number of commencements and completions: "In 2014, commencements were 7,710, around 3,300 less than the completions estimate. In 2013, commencements were 4,708, with 8,301 completions. In 2012, commencements were 4,042, and 8,488 completions" (Irish Times, 2015).

In February 2017, Irish architect, Mel Reynolds, claimed that the ESB derived figures were over-estimated. Reynolds contended that the number of new builds was nearer to 8,000 rather than the government's figure of 15,000. His method of validation was based on "stamp duty transactions (3,148 for the first 11 months of 2016); once-off house commencements (3,272 for the first 10 months of 2016); and the number of local authority builds (117)" (Burke-Kennedy, 2017a). By his analysis, between 2011 and 2015, 21,000 vacant units were double-counted as new builds, with the actual level being 29,722, 42 per cent lower than the official figures. Reynolds concluded: "Market analysis, Government policy, housing targets and the national accounts continue to be based on methodology that is flawed and figures that are significantly distorted" (Burke-Kennedy, 2017a).

In April 2017, economist, Dermot O'Leary (2017) similarly criticised the housing completions data arguing that the "statistics we have now are dangerously useless." O'Leary's point of validation was census data and stamp duty transactions. With respect to the 2016 census data, released that week, "housing stock increased by only 8,800 units in the

five-year period to April 2016. Over the same period, there were completions or, more accurately, 51,329 electricity connections.” O’Leary noted that some of the disparity between stock and completions could be explained by obsolescence, but certainly not all of it. He strongly advocated for the Central Statistics Office (CSO), as an independent body that upholds the European Statistics Code of Practice, to take over from the DHPLG the process of producing housing completions statistics, and also recommended the use of the Building Control Management System (BCMS; a national database) as a source of completions data since builders and developers had by law to record receipt of their completion certificate (O’Leary, 2017). Published on the same day, Lorcan Sirr, a housing academic also challenged the completions figures by validating them against the BCMS, noting that just 2,076 new completions were recorded in the database in 2016 (D’Arcy, 2017). Sirr also noted that a focus on completions was only one side of the housing stock ledger, with no account of obsolescence being taken into account, meaning the net new stock was not being reported (D’Arcy, 2017).

Taking a different validation tack, journalist, Eoin Burke-Kennedy (2017b) estimated that c.3,500 Building Energy Rating (BER) certificates were registered for 2016, a legal requirement prior to the occupation of a new property. This figure was updated to 5,377 houses by another journalist, Una Mullaly (2017), using the Goodbody BER house-building tracker; a figure still far short of the 15,000 completions for 2016 reported by the DHPLG. Similarly, in the following year, economist, John McCarthy (2018), noted the potential use of BER certificates and the disparity between the 9,513 units issued with BERs and the 19,300 completions reported by DHPLG for 2017. Since self-build, one-off housing does not always obtain a BER, Goodbody’s advised that a further 1,000-1,500 units should be added to BER total. However, the Construction Industry Federation challenged the number of self-build units, arguing that it was grossly under-estimated (McCarthy, 2018).

In response to the critiques, the DHPLG rejected the assertion that the official figures were over-inflated and stated that it did not believe its completion data was “in any way unreliable” (Burke-Kennedy, 2017a). This was followed by the Government minister responsible for housing, Simon Coveney, defending the official statistics. The Minister said he “did not understand why this method was being questioned now,” arguing that “the same method of calculating house building has been applied since the 1970s” and that “[p]eople seem to be trying to catch the Government out” (Bardon, 2017). Part of his argument for continuing to use the same methodology was to maintain a time-series of like-with-like data. In a letter to the Irish Times a couple of days later, Minister Coveney stated that the BCMS

was “not designed for gathering statistics and the published article is a perfect example of how statistics can be misrepresented and inaccurately presented” (Coveney, 2017). The principal issue, as he identified it, was “Certificates of Compliance on Completion are not required for one-off houses.” He argued that “[s]uggestions that I am trying to mask the completion figures are nonsense” (Coveney, 2017). It should be noted that the Minister’s own Department had used BCMS to compile official commencement statistics since 2014.

Later in the year, the new Minister for Housing, Eoghan Murphy, took the decision to review the methodology used to calculate completions using ESB connections. The review was undertaken by the CSO and the new Housing Analytics Group of the DHPLG. The primary method employed in the review was to match ESB Network properties to “Building Energy Rating data sets, Revenue data sets, Geodirectory and Census of Population data” (CSO, 2018b) principally using Eircodes (the Irish postcode that is unique for each property) (CSO, 2018a). In June 2018, they announced their findings (CSO, 2018a), an event that also marked the shift in responsibility from the DHPLG to the CSO for publication of housing completions. The review validated the critique of the method, which had been stridently defended by Minister Coveney. This method recorded 85,500 completions between 2011 and 2017. The review concluded that the real figure was 53,578, an over-count of 30,922 (nearly a 58% overstatement) (CSO, 2018a): 11,066 of the connected properties were existing units on unfinished estates, 14,261 were reconnections, and 5,595 were non-dwellings. Despite these over-calculation issues, the CSO concluded that “[o]ur analysis found that the ESB connections dataset remains the most comprehensive available for estimating new dwelling completions,” though an adjustment in the methodology was required to avoid the same issue arising in the future (CSO, 2018a). Other methods, such as using BER certificates or BCMS completion certificates, were found to under-estimate completions due to exemptions or non-compliance. Having seemingly been resolved, the veracity concerns relating to ESB Network derived housing completions data dropped out of the media; that is, until 2023.

In February 2023, the planning data company Construction Information Services Ireland (CIS Ireland) challenged the veracity of the CSO’s completions data (O’Halloran 2023). CIS Ireland contended that the BCMS database is a more sensible method to calculate completions since a completion certificate must be registered with the National Building Control Office before the building can be occupied. The BCMS database showed that there were 23,751 completions in 2022, not 29,851 as reported in the official statistics. Two earlier protagonists rejoined the debate, with Lorcan Sirr and Mel Reynolds (2023) arguing that the “State’s house building numbers still do not add up.” They noted that BCMS and BER

certification are formal processes of recording completions, whereas the state uses a proxy measure. They acknowledge that while one-off housing is exempt from a completion certificate it is possible to estimate the number completed within a given year since the vast majority of one-off houses are completed within 12 months of their commencement notice (for which there are no exemptions). Even taking into account one-off houses, they contended the number of units completed in 2022 fell a long way short of 29,851 (Sirr and Reynolds, 2023). The assumption was electricity connections data was forward counting 2023 completions, with connection to the electricity grid occurring some months before a completion certificate was issued. In the view of one of the interviewees, the process of compiling figures was reverting to an earlier problem:

“We’re sliding back towards that thing of the official figures flattering official policy, which is not great really. ... What they’re doing is they’re bringing forward the completion date by probably about six months in some instances. ... [I]t’s not exact, it’s not untruthful, but it certainly is manipulating the figures. ... My experience with it is that all the metrics associated with whatever the government policy is at the time, the levers are pulled to make the numbers fit that narrative” (IP71, private sector worker).

In response, the Housing Minister, Darragh O’Brien claimed that “[q]uestioning CSO housing figures [is] ‘very dangerous’” and “was akin to questioning their figures on ‘births and deaths’” (Kelly, 2023). Minister O’Brien went on to defend the CSO claiming, contrary to the discussion so far, that:

“its figures and its methodology has never been questioned before ... I don’t think anyone has ever called their expertise, their knowledge, and their know-how into question before. The CSO figures are the correct figures, for us to start questioning those figures or the veracity of them is not something I would support” (Kelly, 2023).

The CSO also defended their methodology, arguing that:

“the certification system was ‘not only missing one-off single houses, of which there were more than 5,500 in 2022, it also lacked a consistent method of data collection’ as individual architects or developers provided the information.”

One of the interviewees, however, disputed the CSO defence, arguing that CIS Ireland:

“went through the BCMS in a really deep dive. So they took away CSO arguments – ‘we know you’re not counting all the one-off things’. Actually they did. They took it into account. So the BCMS is fit for purpose, but it needs an awful lot of tweaking to make it better.” (IP84, academic)

A number of other interviewees also felt that the CIS Ireland data were a better reflection of completions in 2022.

The veracity of the completions figures is still not settled and the numbers remain in the headlines at the time writing, though not with respect to their veracity but their misquoting (Hearne, 2025). In the lead up to and during the November 2024 general election, the government insisted on multiple occasions that 40,000 houses would be completed by the year’s end (Curran, 2024; Leahy, 2024). This claim was made despite second and third quarter CSO data releases indicating that the figures would be nearer 30,000, with the independent think-tank, ESRI, forecasting 33,000 completions (in the end they were recorded as 30,330, short of their 34,000 target) (O’Brien, 2025). The reported reason for this over-claim was that the government were not basing their estimate on the CSO figures, but rather a Deutsche Bank report that estimated that “completions in 2024 would be ‘well in excess of 40,000 units’” based on an analysis of commencement notices (Burke-Kennedy, 2025). As Burke-Kennedy (2025) notes, the government “ministers were in election mode and there was no way the facts were getting in the way of a good story.”

Discussion

All of the potential catalysts identified earlier, which might initiate and then sustain a data debate, were evident in both the vacancy and housing completions cases. The vacancy debate was first sparked by estimated vacancy and oversupply levels made by academics and businesses differing from each other and government estimates. Post-census 2016, the debate was reignited by census vacancy levels strongly deviating from other data sources, notably Geodirectory, and local authority officials not believing the figures based on their knowledge and experience of managing housing in their locale, leading them to initiate validation studies. In addition, stakeholders understood vacancy, and the extent to which it might be a solution to under-supply, differently, including with respect to definition (especially relating to the length of time vacant and what constitutes dereliction), property rights and potential

availability. Concerns relating to data quality sparked the housing completions debate. There were worries about the timeliness of the data and, more importantly, the fidelity of proxy data. Analysts sensed that the number of the houses being completed was being significantly over-counted and turned to a handful other complementary data sources (e.g., BCMS commencements and completions, stamp duty, BER certs) to verify their suspicions. Despite the substantial variances between datasets, the government defended the official dataset and its methodology, seeking to reconstruct a data bounds, leading commentators to conclude that the figures were being deliberately gamed to serve a political agenda. Moreover, there seemed to be a clear conflict of interest, with the DHLGH¹ being responsible for producing and publishing housing completions data when these are, in effect, disclosure data (Poirier, 2022) which reveal whether government housing policy is on track to meet projected targets. Even after the method was reviewed and responsibility for production switched to the CSO, analysts still lacked confidence in the data, which they felt was still being manipulated – primarily through forward counting – to make it appear that the government was nearer to meeting its annual housing production targets than was the case.

Both debates are far from being settled with the cycle of facts being challenged, and counter-facts being proffered, and continuing to surface publicly at particular moments. As one interviewee noted: “It goes in waves of people getting irate about the issue” (IP152, academic). Within each wave, it is evident that the debate progresses through the stages of development, clash, extension and perspective, as each side sets out its case, refutes the views of the opposition, and appeals to a wider constituency through the media. There have been some compromises made during the debate, with the CSO classifying nine types of vacancy in the 2022 census and creating a new occupancy official statistic based on the electricity consumption, and the review and revision to the ESB Networks method used to measure completions. However, there is little sign of capitulation or consensus .

The reason the debates rumble on is because the issues of contention are never solved satisfactorily for all parties and what is at stake does matter. In the case of vacancy, while improvements have been made to how the census classifies vacancy and other measures of vacancy have been introduced, key actors – including those producing the datasets – are not convinced that any one dataset provides an accurate view of vacancy in Ireland. Each measure is hampered in different ways: different definitions of vacancy, a single snapshot every 5 years, limited samples, lack of metadata and methodological transparency, and the use of proxy techniques. In the case of housing completions, having reviewed and fixed the miscounting of completed units, the DHLGH and the CSO stand over the published data,

seeking to reassert a data bounds. However, critics contend that there are still issues with the use of a proxy measure, instead advocating for the use of completion certificate data. Consequently, while vacancy and completions data are presented to the public as facts, many housing experts largely treat them as approximations – facts with associated ‘health-warnings’ that need to be heeded when interpreting what they show.

That trust and confidence in official statistical data is low matters because what is at stake for stakeholders is significant. Vacancy and completions data have been a key part of the evidence-base to inform general and specific housing policies post the 2007-8 financial crisis and to monitor their implementation (Stokes & O’Callaghan, 2021). Vacancy and completions data feed into scenario modelling for the Housing Need Demand Assessment (HNDA) conducted by each local authority, and into local area and county development plans. The data are used by builders and developers to inform decisions on multi-million euro investments and by banks to assess viability and potential liabilities with respect to loan applications. Headline facts are used rhetorically in political debate and elections to challenge policy records and proposals and to persuade voters. Yet, as an interviewee noted: “If your fundamental information about the housing is not correct, you’re completely at sea” (IP71, private sector worker). For another interviewee, using poor quality data is ‘just doing damage’ (IP74, academic), producing invalid insights and creating uncertainty and increasing risk, which is undermining efforts to solve the on-going housing crisis.

While each data debate on the surface seems civil, and for most of the time it is conducted in this manner, at times (such as when the pressure rises during media coverage) it can become more tense and adversarial. This is particularly the case in debates on radio and television given these are performative media, and when the stakes are high, such as a responsible Minister having to defend their Department’s record in the Dail (Irish parliament) or at Oireachtas (parliamentary) committees, or when politicians are running for re-election. At times, the expression of data politics can become more direct and visceral. For example, Kitchin et al. (2013) documents the angry response of developers, real-estate agents and local authority staff in 2010 to vacancy estimates, some of whom wrote letters to newspapers or gave radio interviews denouncing the work, or rang the researchers to shout abusive threats. Likewise, one of the interviewees discussed being pressured to either recant their views or withdraw from the debate:

“everyone sees the beneficial figures from governments and if you question it you’re steamrolled or there’s significant pushback. ... And we were contacted then by the

Department [DHPLG] separately about it. We met them. They tried to manoeuvre us to recant what we were saying or to reduce what we were saying.” (IP71, private sector worker)

In these cases, there was a sense that established actors were seeking on the one hand to silence and push other actors out of the debate, and on the other to reaffirm the data bounds of vacancy and completions data. Such actions do little to create consensus.

Conclusion

Data debates are relatively common with respect to housing across jurisdictions given varying data valences across key stakeholders and the centrality of data to how housing is understood, policy is made, and investment decisions taken. Yet, despite the centrality of data as the evidence bedrock for housing, property and planning, to date, there has been relatively little critical attention paid to data debates and their nature in Urban Studies and cognate disciplines, nor to the operation of data politics in property and planning. This paper has sought to address this lacuna, providing a framework for making sense of data debates and detailing how they unfold in practice.

The two case examples examined illustrate that while official housing data might be seen to constitute facts about the world, they are not incontrovertible, objective and impartial in nature, revealing unassailable truths. Rather, facts are ‘cooked’ to varying degrees, their generation and use shaped by methodological issues and data politics. As such, urban development data should never be accepted at face value; rather its fidelity, veracity, and data politics should be assessed, with the resulting insights informing how data are used and interpreted. While some ‘cooked’ facts might be found to possess strong fidelity and veracity, in other cases their validity might be challenged. Such challenges can be initiated for a variety of reasons (e.g., poor data quality, conflicting evidence across datasets, manipulation for political ends), often prompted by negative affective responses based on *phronesis* and *metis* forms of knowledge. In both empirical cases, actors sensed, based on their knowledge and experience of managing housing and working with housing datasets, that something was ‘not right’ with the data and started to investigate. This then led to a public critique of a dataset and in many instances the provision of alternative counter-datasets. These counter-data were not misinformation or fake news (Weiss, 2024), but data that it was claimed were more accurate than official sources, or at least raised serious questions about their veracity.

Such critique and counter-data can be met with capitulation, compromise, consensus or contestation by data producers. The latter three outcomes involve some degree of data debate as compromise and consensus positions are formulated, or on-going contestation plays out through a cycle of development, clash, extension, and perspective. The reasons for on-going contestation varies, rooted in different beliefs, aims or agendas, some of which are more easily resolved than others. More intractable reasons include poor data acting as a political tactic to obscure or delay policy decisions that threaten vested interests, or a data debate acting as a political distraction from other issues. Given varying data valences and the operations of data politics, it is unlikely that data debates will be adequately addressed solely through technical fixes, though certainly improved data quality, validation studies, and providing full metadata and methodological transparency would help. Instead, a more productive approach would be a negotiated process that seeks to establish a shared understanding of what is being measured and devises a solution that is acceptable to all (or at least most) parties, and the responsibility for the production of data being shifted to an independent party. Such an approach requires a substantive commitment by key stakeholders to take part and an openness to compromise and institutional change. This is not to say that finding an acceptable solution will be achievable, especially if vested interests are at work, but nonetheless the process will generate critical reflection that might alter current processes and future orientations to data. While this paper has made a start on such critical reflection, it is clear that understanding data debates and their workings and impacts, and formulating tactics to resolve them, requires more empirical and conceptual work.

Notes

It should be noted that the key government department involved in the debates has changed its title a number of times and was named the Department of the Environment, Heritage and Local Government (DEHLG) in 2003, renamed as the Department of the Environment, Community and Local Government (DECLG) in 2011, the Department of Housing, Planning and Local Government (DHPLG) in 2017, and the Department of Housing, Local Government and Heritage (DHLGH) in 2020.

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Ethics

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References

- Bardon, S. (2017) Coveney denies spin on numbers for new house builds. *Irish Times*, 20 April, <https://www.irishtimes.com/news/politics/coveney-denies-spin-on-numbers-for-new-house-builds-1.3050956>
- Bowers, S. (2023) Revenue identifies 25,000 homes that could be subject to vacancy tax. *Irish Times*, 8 Oct, <https://www.irishtimes.com/ireland/housing-planning/2023/10/08/revenue-identifies-25000-homes-that-could-be-subject-to-vacancy-tax/>
- Bowker, G. and Star, L. (1999) *Sorting Things Out: Classification and Its Consequences*. MIT Press.
- Branham, R. (1992) *Debate and Critical Analysis: The Harmony of Conflict*. Lawrence Erlbaum Associates.
- Burke-Kennedy, E. (2017a) Department denies housing statistics unreliable. *Irish Times*, 14 Feb, <https://www.irishtimes.com/business/construction/departments-denies-housing-statistics-unreliable-1.2974208>
- Burke-Kennedy, E. (2017b) Take your pick: Four measures of housing activity. *Irish Times*, 6 May. <https://www.irishtimes.com/business/economy/take-your-pick-four-measures-of-housing-activity-1.3072794>

- Burke-Kennedy, E. (2023) Where have Ireland's 200,000 vacant homes gone? Just 3,000 are liable for the new tax, *Irish Times*, 26 Nov,
<https://www.irishtimes.com/business/economy/2023/11/26/where-have-irelands-200000-vacant-homes-gone-just-3000-are-liable-for-the-new-tax/>
- Burke-Kennedy, E. (2025) How using a Deutsche Bank projection landed Government in hot water on housing completions. *Irish Times*, 16 Feb,
<https://www.irishtimes.com/business/economy/2025/02/16/how-using-a-deutsche-bank-projection-landed-the-government-in-hot-water-on-housing-completions/>
- Coveney, S. (2017) How many new homes were built last year? *Irish Times*, 26 April.
<https://www.irishtimes.com/opinion/letters/how-many-new-homes-were-built-last-year-1.3061111>
- CSO (2012) *Profile 4: A Roof Over Our Heads*. Central Statistics Office, Dublin.
https://www.cso.ie/en/media/csoie/census/documents/census2011profile4/Profile_4_The_Roof_over_our_Heads_Full_doc_sig_amended.pdf
- CSO (2017) *Table E1070 - Permanent Housing Units by Occupancy Status and Vacancy Rate 2016*. Central Statistics Office, Dublin, <https://data.cso.ie/>
- CSO (2018a) *New Dwelling Completions Quarter 1 2018*, 14 June. Central Statistics Office, Dublin, <https://www.cso.ie/en/releasesandpublications/ep/p-ndc/newdwellingcompletionsq12018/overview/>
- CSO (2018b) *Press Statement New Dwelling Completions*, 14 June. Central Statistics Office, Dublin.
<https://www.cso.ie/en/csolatestnews/pressreleases/2018pressreleases/pressstatementnewdwellingcompletions/>
- CSO (2023a) *Census of Population 2022 Profile 2 - Housing in Ireland*. Central Statistics Office, Dublin. <https://www.cso.ie/en/releasesandpublications/ep/p-cpp2/censusofpopulation2022profile2-housinginireland/vacantdwellings/>
- CSO (2023b) *Vacant Dwelling Indicators based on Metered Electricity Consumption 2021*. Central Statistics Office, Dublin, <https://www.cso.ie/en/releasesandpublications/fp/fp-viec/vacantdwellingindicatorsbasedonmeteredelectricityconsumption2021/backgroundnotesandmethodology/>
- CSO (n.d.) *Census 2016 Vacant Housing Statistics FAQ's*. Central Statistics Office, Dublin, <https://www.cso.ie/en/census/census2016reports/census2016vacanthousingstatisticsfaqs/>

- Curran, I. (2024) Housing output set to miss Government predictions as completions fall. *Irish Times*, 24 Oct, <https://www.irishtimes.com/business/2024/10/24/housing-output-set-to-miss-government-predictions-as-completions-fall/>
- D’Arcy, C. (2017) Government’s housing figures are ‘misleading’, expert says. *Irish Times*, 24 April, <https://www.irishtimes.com/business/construction/government-s-housing-figures-are-misleading-expert-says-1.3059607>
- Daniel, C. & Pettit, C. (2021) Digital disruption and planning – use of data and digital technology by professional planners, and perceptions of change to planning work. *Australian Planner*, 57(1), 50-64.
- Deschamps, C. (2022) Performance management in public service organizations: Can data be useful to managers even when it is flawed or gamed? *International Public Management Journal*, 25(5), 704–21.
- DKM (2009) *Review of the Construction Industry 2008 and Outlook 2009–2011*. Dublin, September.
<https://web.archive.org/web/20100415174850/http://www.environ.ie/en/Publications/StatisticsandRegularPublications/ConstructionIndustryStatistics/FileDownload,21120,en.pdf>
- Edwards, P.N. (2010) *A Vast Machine: Computer Models, Climate Data, and the Politics of Global Warming*. MIT Press.
- Ehninger, D. & Brockriede, W. (2008) *Decision by Debate*. Idebate Press.
- Fiore-Gartland, B. & Neff, G. (2015) Communication, media-tion, and the expectations of data: Data valences across health and wellness communities. *International Journal of Communication*, 9, 1466–84.
- Gabrys, J., Pritchard, H. & Barratt, B. (2016) Just good enough data: Figuring data citizenships through air pollution sensing and data stories. *Big Data & Society*, 3(2), 1–14.
- Gartland, F. (2007) One in six homes built in five-year period. *Irish Times*, Aug 17, <https://www.irishtimes.com/news/one-in-six-homes-built-in-five-year-period-1.955738>
- Gitelman, L. & Jackson, V. (2013) Introduction. In Gitelman, L. (ed.,) *‘Raw Data’ is an Oxymoron* (pp. 1–14). MIT Press.
- Gleeson, J. & Kitchin, R. (2010a) An estimate of vacant housing in Ireland. *IrelandAfterNAMA*, 18 Jan, <https://irelandafternama.wordpress.com/2010/01/18/an-estimate-of-vacant-housing-in-ireland/>
- Gleeson, J. & Kitchin, R. (2010b) An estimation of oversupply of housing units 2006-09 by county, *IrelandAfterNAMA*, 24 Jan,

- <https://irelandafternama.wordpress.com/2010/01/24/an-estimation-of-oversupply-of-housing-units-2006-09-by-county/>
- Harten, J.G., Kim, A.M. & Brazier, J.C. (2021) Real and fake data in Shanghai's informal rental housing market: Groundtruthing data scraped from the Internet. *Urban Studies*, 58(9), 1831–1845.
- Hearne, R. (2025) The Government needs to come clean on why its housing numbers were so wrong. *Irish Independent*, 2 Feb, <https://www.independent.ie/opinion/rory-hearne-the-government-needs-to-come-clean-on-why-its-housing-numbers-were-so-wrong/a1141069470.html>
- Hennessey, N. (2010) Goodbody: Three years of housing supply exists. *Irish Examiner*, 21 Jan, <https://www.irishexaminer.com/business/arid-20110163.html>
- Holland, K. (2018) Number of vacant homes in Dublin said to be between 900 and 1,000. *Irish Times*, 26 Jan, <https://www.irishtimes.com/news/social-affairs/number-of-vacant-homes-in-dublin-said-to-be-between-900-and-1-000-1.3368771>
- Immergluck, D. & Hollis, A. (2023) Different data, different measures: Comparing alternative indicators of changes in neighborhood home value. *Housing Policy Debate*, 34(6): 793–813.
- Irish Times (2015) So, how many houses are we building really? *Irish Times*, 9 April, <https://www.irishtimes.com/business/construction/so-how-many-houses-are-we-building-really-1.2169158>
- Kelly, O. (2023) Questioning CSO housing figures ‘very dangerous’, Darragh O’Brien says. *Irish Times*, 23 Feb, <https://www.irishtimes.com/ireland/housing-planning/2023/02/23/questioning-cso-housing-figures-very-dangerous-darragh-obrien-says/>
- Kitchin, R. (2012) Census 2011: Housing stock and vacancy. *IrelandAfterNAMA*, 29 March, <https://irelandafternama.wordpress.com/2012/03/29/census-2011-housing-stock-and-vacancy/>
- Kitchin, R. (2022) *The Data Revolution: A Critical Approach to Big Data, Open Data, and Data Infrastructures*. 2nd edition. Sage.
- Kitchin, R. O’Callaghan, C. & Gleeson, J. (2014) The new ruins of Ireland? Unfinished estates in the post-Celtic Tiger era. *International Journal of Urban and Regional Research*, 38(3), 1069–1080.

- Kitchin, R., Gleeson, J. & Dodge, M. (2013) Unfolding Mapping Practices: A New Epistemology for Cartography. *Transactions of the Institute of British Geographers*, 38(3), 480–496.
- Kitchin, R., O’Callaghan, C., Boyle, M., Gleeson J. & Keaveney, K. (2012) Placing neoliberalism: The rise and fall of Ireland’s Celtic Tiger. *Environment and Planning A*, 44(6), 1302-1326.
- Lawson, B. (2022) *The Life of a Number: Measurement, Meaning and the Media*. Bristol University Press.
- Leahy, P. (2024) Almost 40,000 new homes to be completed this year, says Harris. *Irish Times*, 25 Aug, <https://www.irishtimes.com/politics/2024/08/25/almost-40000-new-homes-to-be-completed-this-year-ahead-of-250000-five-year-plan-harris/>
- Loukissas, Y. (2019) *All Data Are Local: Thinking Critically in a Data-Driven Society*. MIT Press.
- Lupton, D. (2020) *Data Selves*. Polity Books.
- Maharawal, M.M. & McElroy, E. (2018) The anti-eviction mapping project: Counter mapping and oral history toward Bay Area housing justice. *Annals of the American Association of Geographers*, 108(2), 380–89.
- Markham, A.N. (2017) Troubling the concept of data in digital qualitative research. In Flick, U. (ed.), *Handbook of Qualitative Data Collection*, (pp. 511–523). Sage.
- Markley, S. and Drogaris, D. (in press) Zoning and municipal data brokers: Toward a political economy of ‘data slop’. In Hynes, D., Kitchin, R. and Mutter, S. (eds) *The Data Politics of Housing, Property and Planning*. Policy Press.
- Marquardt, N. (2016) Counting the countless: Statistics on homelessness and the spatial ontology of political numbers. *Environment and Planning D: Society and Space*, 34(2): 301–318.
- McArdle, P. (2010) Estimates that go round the houses highlight need for better data. *Irish Times*, 29 Jan, <https://www.irishtimes.com/business/estimates-that-go-round-the-houses-highlight-need-for-better-data-1.1274185>
- McCartney, J. (2018) How many houses do we really need? *Irish Times*, 1 June, <https://www.irishtimes.com/opinion/how-many-houses-do-we-really-need-1.3515359>
- McElroy, E. (2023) Dis/possessory data politics: From tenant screening to anti-eviction organizing. *International Journal of Urban and Region Research*, 47(1), 54–70.

- McGee, H. (2017) CSO standing over Census figures of 183,000 vacant dwellings. *Irish Times*, 14 Sept, <https://www.irishtimes.com/news/ireland/irish-news/cso-standing-over-census-figures-of-183-000-vacant-dwellings-1.3221521>
- Meng, A. & DiSalvo, C. (2018) Grassroots resource mobilization through counter-data action. *Big Data & Society*, 5(2), 1–12.
- Mullally, U. (2017) Housing policy built upon flawed data. *Irish Times*, 9 Oct, <https://www.irishtimes.com/opinion/una-mullally-housing-policy-built-upon-flawed-data-1.3248623>
- O'Brien, C. (2025) Housing completions fall short of 2024 Government target of 40,000 units. *Irish Times*, 23 Jan, <https://www.irishtimes.com/business/2025/01/23/housing-completions-fall-short-of-2024-government-target/>
- O'Callaghan, C., Stokes, K. and Nic Lochlainn, M. (in press) Telling stories with vacancy data: Navigating between housing politics and praxis In Hynes, D., Kitchen, R. and Mutter, S. (eds) *The Data Politics of Housing, Property and Planning*. Policy Press.
- O'Halloran, B. (2023) Number of homes completed last year overestimated by 6,000 units, figures suggest. *Irish Times*, 14 Feb. <https://www.irishtimes.com/business/2023/02/14/claim-home-completion-figure-overestimated-by-6000-units/>
- O'Leary, D. (2017) Housing data reveals return of 'leprechaun economics'. *Irish Times*, 21 April. <https://www.irishtimes.com/business/economy/housing-data-reveals-return-of-leprechaun-economics-1.3056546>
- Poirier, L. (2022) Accountable data: The politics and pragmatics of disclosure datasets. *FAccT '22: Proceedings of the 2022 ACM Conference on Fairness, Accountability, and Transparency*, (pp. 1446–56). ACM.
- Poovey, M. (1998) *A History of the Modern Fact: Problems of Knowledge in the Sciences of Wealth and Society*. University of Chicago Press.
- Ruppert, E., Isin, E. & Bigo, D. (2017) Data politics. *Big Data & Society*, 5(2), 1–7.
- Shepard, M. (2022) *There Are No Facts: Attentive Algorithms, Extractive Data Practices, and the Quantification of Everyday Life*. MIT Press
- Sirr, L. and Reynolds, M. (2023) State's house building numbers still do not add up. *Irish Times*, 22 Feb, <https://www.irishtimes.com/opinion/2023/02/22/states-housebuilding-numbers-still-do-not-add-up/>

- St-Hilaire, C., Brunila, M. & Wachsmuth, D. (2024). 'High rises and housing stress: A spatial big data analysis of rental housing financialization. *Journal of the American Planning Association*, 90(1), 129-143.
- Stokes, K. & O'Callaghan, C. (2021) *Taking stock of Dublin's vacant sites and properties: A review of existing policies and measures*. Department of Geography, Trinity College Dublin. <https://edepositireland.ie/handle/2262/95290>
- Weiss, A. (2024) *Counterfact: Fake News and Misinformation in the Digital Information Age*. Rowan & Littlefield.
- Williams, B., Hughes, B. & Redmond, D. (2010) Managing an Unstable Housing Market. *UCD Urban Institute Ireland Working Paper Series 10/02*. March.
<https://web.archive.org/web/20100327032830/http://www.uep.ie/pdfs/WP%201002%20W.pdf>