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*Article*

# Measuring the Impact of New Publications on Housing in Urban Studies

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**Abstract:** This article seeks to understand how the incorporation of new scientific articles in the field of urban studies on topics related to housing, manage to impact specialized media. In other words, it seeks to identify whether social science that publishes findings on housing has become less relevant over time, as occurs in other areas of knowledge. To do this, data is collected from the Web of Science of the urban studies categories, using as a filter that either in the title, keywords or abstract contain the word "housing". With this database, all the DOIs of the indexed articles are taken and it is reviewed whether those new DOIs incorporated into the knowledge database have impacted in relation to new citations that of said DOIs that are added in the future. More than looking for the impact of an article for the particular, it is sought to review added values. It is identified that the only disruptive moment occurred after the 2008 real estate crisis. This finding emphasizes the importance of looking for new paths for the production of knowledge on housing that is novel and original, that manages to break with an apparent trend of scarce innovation or lack of knowledge among peers of what is being published in the matter.

**Keywords:** bibliometrics; housing; urban studies; impact; disruptive science

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## Introduction

The challenges related to housing policies are multifaceted and encompass several aspects of the formulation, implementation, and impact of such policies. Problems such as inefficient housing financing, inadequate research and funding, shortages of skilled labor, and insufficient infrastructure have been identified as challenges in the implementation of housing policies [1]. In addition, corruption, nepotism, security challenges, political interference, inefficient project inspection, poor distribution and allocation, government policy structures, and weak institutional frameworks present significant obstacles to the successful implementation of housing policies [1]. To this is added that the unsustainable nature of certain housing regimes has led to social conflicts and threats to political stability, highlighting the complexity of challenges in housing policy [2]. Additionally, the different political positions embedded in different knowledge frameworks and empirical evidence represent a significant challenge for policymakers seeking to build a unified response to affordability problems [3]. The influence of bureaucratic and environmental factors on state innovations in housing policy further underscores the complexity of addressing housing challenges [4]. In the context of new housing models, such as in China, single affordable housing policies have faced several challenges in their implementation, indicating the diverse obstacles that are faced in different regions [5]. Similarly, resistance to neoliberal housing models and the challenges associated with changing government approaches to housing have been highlighted, emphasizing the complexities involved in housing policy reform [6,7]. Empirical studies have illustrated how public policies, both from central and local governments, affect the dynamics of the housing market, shedding light on the intricate relationship between policy and housing provision [8–11]. Inefficient tariffs, urban planning, and housing policies have been identified as contributing factors to the crisis situation in housing and communal services, emphasizing the interconnected nature of the challenges of housing policy [12–16]. The ongoing challenges in the delivery of housing have been attributed to ineffective,

unsatisfactory, and unviable housing policies, highlighting the importance of commitment and political will to address housing problems [17–20]. The combination of a small stock of social housing and a large demand from low-income households creates political dilemmas, further underlining the complexities of housing policy [19,21–24]. However, evidence on this matter exists and is not scarce, so the question that remains to be resolved is whether this evidence is being disruptive enough to generate changes in the courses of current housing practices in different parts of the world. In other words, are the results in social sciences on housing being disruptive enough to generate a major change?

The assessment of disruptive scientific publications is an increasingly relevant issue in various fields of knowledge, including urban studies. Disruptive publications are understood as those that introduce new concepts or technologies, causing a significant change in existing frameworks and overshadowing previous work. Horen and colleagues [25] presented a "disruption index" to quantify the degree of disruptive impact of an article in medical areas, based on the frequency of its citations compared to the references it cites. This metric offers a quantitative measure of the disruptive impact of a publication in its field.

This was also a concern raised by Bornmann and his team [26], who discussed the development of indicators to measure the disruptive nature of scientific publications, highlighting the importance of identifying disruptive contributions in research fields. The recognition of the impact of disruptive scientific publications has become a field of study in several domains. For example, in the medical field, Hohmann and colleagues [27] highlighted the importance of medical journals as forums for disruptive research. Similarly, Gao and his team [28] addressed the disruptive effects of the COVID-19 pandemic on scientific research, pointing to possible long-term implications. Additionally, Wang and colleagues [29] underscored the negative impact of invalid scientific knowledge and rumors during epidemic outbreaks, highlighting the potential for disruption to social order.

As part of the optimization of these studies, bibliometric analyses have been applied to understand the state of the art in various scientific fields. Denche-Zamorano and his team [30] highlighted the use of bibliometric studies to quantitatively analyze scientific publications, providing insights into trends, productivity, and relevance of research topics. Similarly, Regus and colleagues (2022) employed bibliometric methods to analyze the state of the art in the use of pesticides in vineyard agroecosystems, demonstrating the applicability of bibliometrics to the study of different aspects of science [31].

This article contributes by generating a simplified indicator for the study of the disruption of new publications in specific areas of knowledge, taking the Web of Science as a data reference and applying bibliometric data sorting studies to review the impact of new publications year by year from 2000 to 2023. The results indicate that there is a low disruptive capacity in new publications on housing in the area of urban studies. This result may be a call to review methodologies, rethink ways of presenting ideas, and move towards more ambitious searches in terms of theories and practices related to urban studies and housing in particular.

## Methodology

Methodologically, this paper is inspired by the work of Park et al. [32] To generate an impact indicator for new publications in the field of urban studies, a structured approach was followed that encompasses the definition of objectives, data selection and preparation, analysis, and applied statistical techniques. The details of each of these aspects are outlined below:

The objective of this manuscript is to share a simplified method for assessing the impact of new publications. For this purpose, we start from an assumption: if new publications indexed in a database offer disruptive interpretations or results, these publications will increase in the number of citations in the following years. Therefore, if a good part of the new publications are disruptive, the aggregated trend of new citations for new publications should increase. Conversely, if citations do not generate a sustained increase over time, it can be argued that the new publications do not offer results valued by the international expert community as they are not cited. Thus, concretely in this manuscript, the aim was to measure how recent publications in urban studies have influenced the

academic community, based on the frequency of citation per year, taking an annual average of new citations for articles published between 2000 and 2023. With this, the goal was to contribute to understanding the evolution over time of new publications by examining how the impact of these publications changes year after year.

A database extracted from the Web of Science was used, which includes publications in urban studies on housing-related topics from 2000 to 2023. Only articles from the main WOS database were selected, excluding articles indexed in ESCI. The data were processed and structured to facilitate analysis with the help of R and its Bibliometrix package [33]. From the database developed in Bibliometrix, data cleaning was carried out to verify the existence of repetitions. We had 11947 articles. Based on the bibliographic information of these articles, a process of extracting DOIs was carried out, given that they are unique and non-repeatable identifiers for each publication. With the available DOIs, the data were organized by year to see if the DOIs that entered in a year, then received new citations in the following years. To achieve consistency in this exploratory work, the decision was made to eliminate rows with missing data (NA) to ensure the accuracy of the analysis.

A simplified approach was employed to determine the new citations of each article for each year that passed. This methodological and technical approach allowed for a detailed and quantitative assessment of the impact of new publications in urban studies on housing, offering a vision of the change in their academic influence over time.

Results and Discussion

La Figura 1 muestra un resumen de los artículos disruptivos, ilustrando tendencias y cambios en el impacto de las publicaciones a lo largo del tiempo. Esta figura muestra un gráfico de resumen de los artículos disruptivos, reflejando cambios en el impacto de las publicaciones a lo largo del tiempo. Un hallazgo notable es que el único momento disruptivo identificado ocurrió después de la crisis inmobiliaria de 2008, lo que sugiere un aumento en la disrupción y la innovación durante este período. Esta observación subraya la importancia de desarrollar conocimientos novedosos y originales en estudios urbanos relacionados con la vivienda.

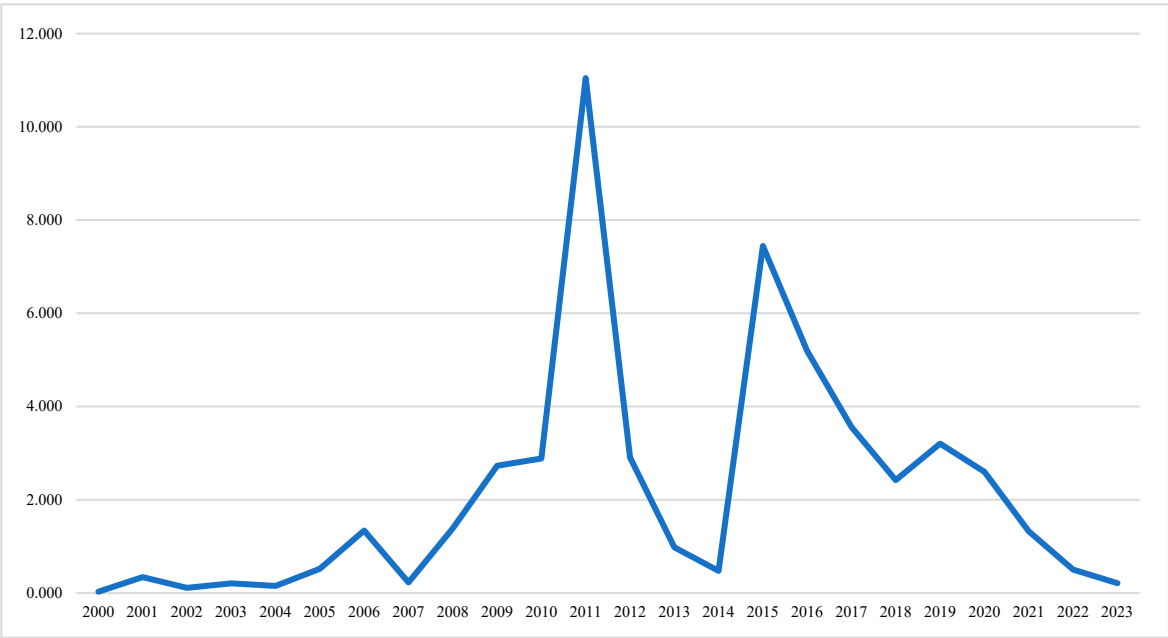


Figure 1. Plot of the disruptive papers summary.

La Tabla 1 del documento proporciona un análisis detallado del impacto de las publicaciones en estudios urbanos sobre vivienda, utilizando datos bibliométricos. Presenta un desglose anual desde 2000 hasta 2023, incluyendo el promedio de citas por artículo y el número total de artículos publicados cada año. La tabla destaca variaciones significativas en estas métricas, revelando tendencias y cambios en el impacto y la relevancia de las publicaciones en este campo. Las

fluctuaciones en el número de artículos y las citaciones reflejan cómo eventos globales y desarrollos académicos han influido en la investigación sobre vivienda en estudios urbanos. La tabla es un recurso clave para comprender la evolución de la disrupción y el impacto en esta área de estudio.

Table 1. Results of the analysis.

Year	Average citations per article	Number of articles	Variation of Articles	Variation of citations per article
2000	0.029	205	0	0
2001	0.342	202	-0.014634146	10.6707921
2002	0.111	208	0.02970297	-0.6762821
2003	0.207	208	0	0.86956522
2004	0.152	224	0.076923077	-0.2657807
2005	0.519	206	-0.080357143	2.42204455
2006	1.340	265	0.286407767	1.57908658
2007	0.227	233	-0.120754717	-0.8302001
2008	1.389	324	0.39055794	5.10587002
2009	2.730	359	0.108024691	0.96545961
2010	2.884	379	0.055710306	0.05645092
2011	11.045	418	0.102902375	2.8300341
2012	2.910	454	0.086124402	-0.7365711
2013	0.978	509	0.121145374	-0.6637482
2014	0.473	503	-0.011787819	-0.5163876
2015	7.442	523	0.039761431	14.7275897
2016	5.188	633	0.210325048	-0.3028467
2017	3.556	646	0.020537125	-0.3146238
2018	2.419	708	0.095975232	-0.3195509
2019	3.203	765	0.080508475	0.32367249
2020	2.598	757	-0.010457516	-0.1886582
2021	1.322	761	0.005284016	-0.4912495
2022	0.502	931	0.223390276	-0.6205506
2023	0.211	1018	0.093447905	-0.5789599

Discussion and Conclusions

In this study, I undertook a comprehensive analysis of the disruptive capacity of recent publications in the field of urban studies, with a particular focus on housing. The findings reveal a nuanced landscape of academic impact, characterized primarily by a low level of disruption in the research domain of housing in urban studies. This trend is evidenced by the metrics derived from citation analysis, indicating that groundbreaking shifts in understanding or approach remain relatively rare in the field.

Interestingly, the analysis unearthed a notable exception around the period of the 2008 housing crisis. This spike in disruptive research during and after the crisis highlights the significant influence external socio-economic events can have on academic focus and innovation. This observation aligns with the broader understanding within academic discourse that external, real-world events can serve as catalysts for more profound and rapid shifts in research trajectories. Nevertheless, this is more a singularity, a single event in 20 years, rather than a trend in this study at least. This finding also presents a somewhat unexpected narrative when contrasted with existing literature. The prevailing expectation in academic circles often suggests that significant societal challenges, such as those presented by housing issues, would naturally foster more innovative and original research. The study, in contrast, indicates that such a response is not as immediate or as pronounced as one might expect, except under extraordinary circumstances like the 2008 crisis. This contradiction emphasizes the complexity of academic innovation and the myriad factors that influence it.

Turning to the methodological dimensions of the research, it's important to acknowledge both the strengths and limitations inherent in this approach. One of the key strengths lies in the comprehensive and systematic approach to data collection and analysis, leveraging the extensive database of Web of Science. This allowed for a robust examination of publication trends over a significant period (2000-2023). Additionally, the study's focus on measuring disruptiveness over a prolonged period represents a novel approach within the field.



However, a reliance on citation metrics as the primary measure of disruptiveness does introduce certain limitations. Citation counts, while useful, may not fully capture the multifaceted nature of academic impact, particularly in terms of qualitative influences like policy changes or practical applications. Furthermore, the generalizability of the findings is inherently limited to the field of urban studies and housing, and the impact of more recent publications may not be entirely captured due to the typical time lag in accruing citations.

The implications of the findings extend well beyond the immediate context of this study. They underscore a broader need within the field of urban studies, particularly in housing research, for more innovative and disruptive academic work. The pronounced impact of the 2008 housing crisis on research trends within the field also points to a strong interplay between real-world events and academic focus, suggesting that external socio-economic factors can play a significant role in shaping academic discourse.

Looking forward, several avenues for future research emerge from this study. There is a clear opportunity for incorporating qualitative measures of disruptiveness, which could provide a more holistic understanding of impact. Expanding the scope of research to include other fields related to urban development could also offer valuable insights. Additionally, longitudinal studies that continue tracking the impact of publications, especially in the wake of significant global events, would contribute to a deeper understanding of the dynamics at play. Finally, exploring the underlying reasons for the rarity of disruptive research in this field could yield critical insights into fostering more groundbreaking academic work.

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