SCENARIOS POST FORECLOSURE CRISIS IN CATALONIA: ACCUMULATION OF HOUSING BY BANKS AS THE FIRST STEP FOR THE RISE OF LARGE PRIVATE LANDLORDS

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With 2 figures and 6 tables
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Summary: The article analyses the uneven geography of foreclosed housing owned by large private landlords in Catalonia. A Negative Binomial Model is applied to identify the local determinants of the concentration patterns of 32,941 housing units in Catalan cities. Indicators of socioeconomic vulnerability, such as the percentage of foreign population or the percentage of unemployed residents, are identified as key explanatory factors of the regional geography of housing accumulated by banks which, in turn, correspond to areas in which global corporate landlords are focusing their business for profiteering from the rental market in the current expansionist phase of the housing cycle. Our findings demonstrate that the concentration of properties in the most vulnerable areas was fuelled by foreclosures responsibility of banks rescued with public funds. In tandem, we provide detailed information for the understanding of the new scenarios that have emerged during the post-crisis phase.

Zusammenfassung: Der Artikel analysiert die ungleiche Geographie zwangsversteigerter Immobilien im Besitz großer privater Wohnungsgesellschaften in Katalonien. Ein negatives Binomialmodell wird angewendet, um die lokalen Determinanten der Konzentrationsmuster von 32.941 Wohneinheiten in katalanischen Städten zu identifizieren. Indikatoren der sozioökonomischen Verwundbarkeit, wie der Anteil der ausländischen Bevölkerung oder der Anteil der arbeitslosen Einwohner, werden als wesentliche Erklärungsfaktoren für die regionale Geographie des von Banken angesammelten Wohnungsbestands identifiziert, die wiederum den Bereichen entsprechen, in denen globale Vermieter ihre Schwerpunkte setzen um in der gegenwärtigen Expansionsphase des Wohnungszyklus vom Mietmarkt zu profitieren. Unsere Ergebnisse zeigen, dass die Konzentration von Immobilien in den am stärksten gefährdeten Gebieten durch die Zwangsvollstreckungsverantwortung von Banken, die mit öffentlichen Mitteln gerettet wurden, angeheizt wurde. Gleichzeitig liefern wir detaillierte Informationen zum Verständnis neuer Szenarien, die sich in der Nachkrisenphase ergeben haben.

Keywords: foreclosures, evictions, housing crisis, corporate landlords, Catalonia

1 Introduction

After the bursting of the property bubble following the global financial crash in 2008, the closure of production facilities, the growth in unemployment and the spread of poverty and social exclusion were some of the common patterns among developed countries. One of the main manifestations of that situation was the proliferation of evictions via mortgage foreclosures caused by the inability of a high number of families to meet the cost of their mortgage loans. The burst of the bubble, therefore, brought a wave of evictions that in the first years was mainly due to repossession of mortgaged properties by lenders, but during the last years they have predominantly been the consequence of rent arrears (Kenna et al. 2016; Parreño-Castellano et al. 2019). Spain has been the European country with the highest number of mortgage foreclosures (near to 700,000) and evictions (380,000) since 2008 (Beswick et al. 2016; Gutiérrez and Dòmenech 2020). The acquisition of housing stock by banks has been a phenomenon accompanied, and even boosted, by the processes of restructuring and sanitising of the Spanish financial sector (Alexandri and Janoschka 2018; Vives-Miró and Gutiérrez 2017). The restructuring process involved the socialisation of losses through the rescue with public funds of the Spanish financial sector and the conversion of regional saving banks into private banks (Gutiérrez and Vives-Miró 2018). According to data from the Bank of Spain, the value of direct aid to the banking sector reached €61,000M.[1)]

[1)] See a detailed analysis on https://www.bde.es/bde/es/secciones/prensa/infointeres/reestructuracion/

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However, the data provided by the Citizen Debt Audit Platform indicate a much higher figure. They amount to €1.4 billion in the total volume of public money that has injected directly or indirectly into financial institutions (Plataforma auditoría ciudadana de la deuda 2013). Meanwhile, the sanitising process consisted on transferring assets from the property sector (land, empty/unsold/unfinished housing and housing acquired through mortgage foreclosure) to private investors, investment companies (such as vulture funds) or to the SAREB (Company for the Management of Assets proceeding from the Restructuring of the Banking System – Sociedad de Gestión de Activos Procedentes de la Reestructuración Bancaria). The latter is the Spanish "bad bank," a half-publicly funded society set up in 2012 (Law 24/2012 and Law 1559/2012) as part of the bank bailout with a mandate to acquire housing portfolios and loans at high risk of default or in arrears from banks rescued with public funds in order to sell them. The Fund for Orderly Bank Restructuring (FROB), created with public funds in 2009 (Law 9/2009) to promote the restructuring of the Spanish financial system, is the main shareholder of SAREB with 45% of the company's capital and contributed, in its constitution, with €2,192M of public funds (Byrne 2015; Gutiérrez and Domènech 2017).

Therefore, both banks and the SAREB have set out a clear strategy involving the sale of their property portfolios to global corporate landlords. This transfer of assets has been accelerated by the approval of laws that have given favourable fiscal conditions to investment companies in the real estate sector (SOCIMIs, the Spanish REITs – Real Estate Investment Trust) (Janoschka et al. 2019). In fact, Law 16/2012 (on tax measures aimed at consolidating public finances and boosting economic activity) modified and improved the already favourable conditions for these companies with respect to Law 11/2009, through a reduction of corporation taxes. Therefore, in Spain, as has happened in Ireland and many other western countries, the introduction of REITs is part of the solution to the crisis (Aalbers, 2019; Waldron, 2018). Undervalued housing is selectively included in a revised financial accumulation regime based on rental housing. Thus, the ongoing expansionist phase of the housing cycle is (and will be) dominated by investment funds (also called vulture funds) by means of the extraction of profits from the rising prices of the rental market (Byrne 2019; Fields 2018). The financialization of the real estate has been, therefore, expanded by the process known in the literature as "bulk buy-to-let" (Nethercorte 2019), consisting on acquiring large-volume of existing housing stock and converting it to rental accommodation.

At present, around 30 SOCIMIs are dedicated to the management of housing rental in Spain. Among them, the North American investment fund Blackstone stands out for being the largest housing landlord with more than 30,000 housing units.[2)] Since the impact of evictions via mortgage foreclosures was not equally distributed through the country, the ongoing expansionist phase of the housing cycle dominated by the accumulation of housing, first in hands of the banking sector and now in those of the REITs (Beswick et al. 2016; García-Lamarca 2020) it is expected to have also an uneven distribution.

Considering this context, the main objective of this study is to unravel the socio-spatial determinants of the uneven geography of the accumulation of empty housing by large landlords in Catalonia in the post-foreclosure crisis context. Following that main objective, the study allows us to achieve two related specific subobjectives: to weigh the different role of that each of the main Spanish banks played in the previously mentioned spatial logics; and to identify the territories that, as a consequence of the accumulation of assets, could become protagonists in the arrival of global investment funds looking for the profiteering from the rental market in the expansionist phase of the housing cycle. The study is based on an extraction of data from the register of empty housing units owned by large private landlords belonging to the Catalan Housing Agency, which is a public entity belonging to the Government of Catalonia. This register is the unique that exists in Spain and, at the moment of extraction (March 2016), the majority of the landlords were Spanish banks, real estate companies related to the banks and the SAREB.

According to the aforementioned research objectives, we analyse the socio-spatial logics the housing units that, as of March 2016, were in hands of large private landlords. We assume that local heterogeneities matter in terms of occurrence likelihood of these phenomena. Accordingly, instead of strategies followed by previous empirical contributions that analyse evictions via foreclosure only as a function of individual characteristics of housing tenants, this paper focuses on territorial characteristics that may play a similar role in explaining the

2) https://www.eldiario.es/economia/Blackstone-controla-viviendas-alquiler-socimis_0_901160622.html

scenarios post-crisis. Obviously, we do not neglect individual specific characteristics as age, income or country of origin that have been previously identified as important determinants, but we concentrate on how common characteristics existing at local level (i.e., municipality) may also help to explain the accumulation of housing by large private landlords. This approach is quite innovative for the Spanish case, since previous empirical evidence consists on approaches that are descriptive (García-Lamarca 2020; Gutiérrez and Vives-Miró 2018), have a geospatial dimension (Gutiérrez and Domènech 2017; Gutiérrez and Delclòs 2016) or focus on individual characteristics (Raya 2018), but no territorial econometric approach has ever been used at the local level to analyse an entire region, as we do here. The structure of this paper is as follows. After this introduction, the second section introduced a review of the background of the study. The third section details the data used and methods implemented. The fourth section describes and discusses the main results and the fifth section concludes and analyses the main implications of our study.

2 Background

During the last decade, a significant number of studies have been analysing the spatiality of evictions and foreclosures. The USA is the country with the most complete literature in this field, but European countries such as Spain, UK or Ireland, that have faced intensively the mortgage crisis have also a large literature studying the spatial logics of foreclosures and evictions in different territorial scales. Their results indicate that not only those countries, regions and neighbourhoods most affected by the wave of evictions and foreclosures were most exposed to the property bubble and construction boom (Burriel 2014), but they also were the most social and economically vulnerable (Medina et al. 2020; Méndez and Plaza 2016). The evidences in these countries show that concentration of foreclosures in these areas has contributed to deepen precariousness (García-Hernández and Ginés-De La Nuez 2020 Gutiérrez and Arauzo-Carod 2018; Parreño-Castellano et al. 2018) and has led to negative spillover effects (Kim and Cho 2016; Lin et al. 2009) such as the deterioration of public health (Wang 2020; Libman et al. 2012), the increase in crime rates (Immergluck and Smith 2006), the intensification of social stigmatisation and racial segregation (Rugh and Massey 2010) or the falling of the housing market values (Lin et al. 2009). Although a global phenomenon, the impact has varied depending on the economic base of each country or region. For instance, bank-dominated economies (Raya 2017) and economic models built on property-based debt (Méndez 2018), as the Spanish, have been the most affected. The ongoing restructuring of housing markets as well as the housing policies implemented after the global financial crisis of 2008 are re-shaping cities and neighbourhoods worldwide (Fields and Hodkinson 2018). A growing literature critically studies the "solutions" of the financial and housing crisis adopted by most EU national governments, the USA, and international institutions and their deep impact in urban areas. These solutions imply, as mentioned previously, the socialisation of losses through the rescue of banks with public funds, and the creation of societies ("bad banks") that allow to reintroduce liquidity to the financial system, concentrate the toxic property assets, and facilitate the transition after the crash to the new expansive housing cycle (Byrne 2015). It is in this framework when the global corporate landlords (mainly investment funds) could emerge as key actors in the post-crisis scenario, by acquiring large amount of housing stock from rescued or "bad banks" (Gutiérrez and Domènech 2020).

In fact, after the crash in 2008, banks accumulated a huge volume of housing in working-class neighbourhoods and played a key role in the management of the so-called toxic or distressed real estate assets (Byrne 2015; García-Lamarca 2020). Thanks to the transfer of these large housing portfolios to "bad banks" as the SAREB -one of the biggest in Europe-, they are playing now the role of "market makers" and generating a framework to facilitate new rounds of profit in the housing market (Janoschka et al. 2019). After the creation of SAREB in 2014, the track was ready for the arrival and investment of global corporate landlords, private equity firms and hedge funds.

The logics of these phenomena are rather explored and analysed from a spatial perspective. Hence, although different studies framed in the USA (Fields 2018), Australia (Pawson and Martin 2020), Greece (Alexandri and Janoschka 2018), Ireland (Byrne 2019), the United Kingdom (Beswick et al. 2016; Byrne 2019) and Spain (Byrne 2019; Gutiérrez and Domènech 2017; Janoschka et al. 2019) analyse the role of these new large private landlords in the management of the housing stock after the crisis, there is a scarcity of them pinpointing

potential areas of action in which they are concentrating its activity in the ongoing expansionist phase of the housing cycle.

Within this context, our study aims to add new empirical evidence that helps to explain the socio-spatial logics of these processes in Catalonia. The dataset used allows us to identify the specific momentum in 2016, when the largest Spanish banks and the SAREB have accumulated a high volume of empty housing acquired via foreclosures during years after the crash of the bubble, and prior to progressively transferring these assets to global investment funds.

3 Empirical approach

The empirical approach of this article consists of the development of an econometric analysis. In this section we present the data related to the dependent variable and the explanatory variables, as well as the selected econometric model.

3.1 Data

The dataset used in this study is composed by two main types of data: data about housing units in hands of large private landlords acquired via mortgage foreclosure; and data about territorial characteristics assumed to influence the accumulation of housing in hands of large private landlords.

The first type of data was obtained from the register of empty housing units owned by banks (HOB) that was created by the Catalan Housing Agency in March 2016, after the approval of the Law 14/2015 (on empty homes tax). This register includes the number of housing units acquired via mortgage foreclosures that were not initially put up for auction and that had not yet been sold, either to private individuals or investment funds, when the register was created. It should be noted that it was possible to distinguish between two types of housing accumulated by banks. Firstly, there is the one that is of interest for our study, the owner-occupied housing with mortgages or, in other words, loans that fell into arrears and, consequently supposed an eviction. Secondly, the new housing units that had never been occupied and that ended up in the hands of the banks through the execution of the mortgages of the companies that owned and commercialised them (construction companies and/or property agents). This second typology was not included in this study, as it is not related to an eviction of residents due to mortgage foreclosure. The stock of empty housing owned by banks collected in this dataset is a sample that previous studies estimate that covers more than 40% of the total number of evictions via mortgage foreclosure in Catalonia during the period 2008-2015 (Gutiérrez and Domènech 2018). It should also by noted that, as this data is a stock of empty foreclosed housing in 2016, it could overrepresent the territories with less profitability in the housing market. The foreclosed properties in the areas with higher profitability could be sold or rented more quickly than the others.

The second type of data about territorial characteristics that may influence the accumulation of HOB has been obtained from the Catalan Statistical Institute (IDESCAT), the Catalan Cartographical Institute (CCI), the Spanish Ministry of Public Works, and the Spanish Statistical Institute (INE).[3] In view that some municipality-level statistical information provided by IDESCAT is only available for those municipalities larger than 5,000 inhabitants, we do not cover all Catalan municipalities but only those over that threshold size (specifically, 213 out of 947). Despite this, the sample is representative of the whole population, since it accounts for the 89.6% of the total population and the 88.3% of the HOB in Catalonia. Thus, the large private landlords own a total of 32,941 housing units in these 213 municipalities.

Data on territorial characteristics has been chosen considering two basic assumptions. The first one is that evictions via mortgage foreclosures are closely related with previous socioeconomic conditions and with some geographically specific attributes. The second one is that actual socioeconomic conditions and geographical attributes contribute to hinder, for the moment being, the sale/rental of these HOB. Therefore, as indicated in Table 1, the variables included are related to: agglomeration economies; socioeconomic conditions; human capital characteristics; and real estate characteristics. Additionally, as we want to weigh the role exerted by the Spanish banks and the SAREB in the socio-spatial logics of housing accumulation at the municipal level and we hypothesize that not all banks behave in the same way when facing management of real estate business and foreclosures, we have added a fifth vector: banks.

[3] Explanatory variables are lagged some years in order to control for potential endogeneity.

Tab. 1: Explanatory variables: definition and sources

Variable	Definition	Source
Agglomeration economies		
GDP	GDP per capita (2011)	IDESCAT
CAPITAL	Dummy variable (1 if municipality is a county capital)	CCI
Socioeconomic conditions		
UNEMP	Unemployment rate (2011)	IDESCAT
UNEMPCHG	Change in unemployment rate (2001-2011)	Authors' calculations from IDESCAT
SERVICES	Employed in services over active population (2011)	IDESCAT
Human capital characteristics		
FOREIGN	Percentage of foreign residents from non-OECD countries (2011)	IDESCAT
FOR_CHG	Change of residents born at foreign countries (2001-2011)	Authors' calculations from IDESCAT
YOUNG	Population younger than 10 (2011)	IDESCAT
Real state characteristics		
TRANS	Number of real estate transactions (2004-2007)	Spanish Ministry of Public Works
LOANS	Percentage of housing units with outstanding payments with respect to the total of main housing units (2011)	INE
Banks		
BBVA	Number of HOBs owned by BBVA	Own elaboration with data from the Catalan Housing Agency; Bank of Spain
CAIXABANK	Number of HOBs owned by CAIXABANK	
SANTANDER	Number of HOBs owned by SANTANDER	
OTHER BANKS	Number of HOBs owned by other banks	
SAREB	Number of HOBs owned by SAREB	

Agglomeration economies include GDP per capita (GDP) and a dummy variable indicating whether municipalities are county capitals (CAPITAL). It is important to notice that agglomeration economies are key determinants to foster economic activities and, consequently, they act as important market forces.

Economic conditions include unemployment rate in 2011 (UNEMP), change in unemployment rate between 2001 and 2011 (UNEMPCHG), and percentage of workers employed in service industries in 2011 (SERVICES). Among previous covariates, unemployment level (UNEMP) proxies the economic vulnerability of the population, since being unemployed is associated with a lower income that, in turn, reduces the capacity to afford mortgage payments and increases the probability of an eviction happening (González-Pérez et al. 2020). In a similar way, an increase in unemployment indicates a worsening of the capacity to afford these payments. As for the industry distribution of workforce, it serves as control variable and there are no ex-ante expectations about their role over evictions.

Human capital characteristics include percentage (2011) of foreign residents born in non-OECD countries (FOREIGN), change in foreign residents between 2001 and 2011 (FOR_CHG), and inhabitants younger than 10 years old in 2011 (YOUNG). These social characteristics help to indicate capacity of individuals to afford paying mortgage payments and exposure to home foreclosures and mortgages. Migrants from non-OECD countries (FOREIGN) tend to have lower income levels and have been exposed to more abusive interest rates in Spain (Díaz-Serrano and Raya 2014), whilst municipalities with younger populations (YOUNG) are more prone to be involved with mortgage payments and, consequently, are more exposed to home foreclosures (i.e., families with kids push up demand for purchasing dwellings in the real estate markets). In this regard, the variable of inhabitants younger than 10 years old is used as an exposure variable to control for the potential count of HOB.

Finally, *real estate characteristics* include the number of transactions during the peak (2004-2007) of the real estate bubble (TRANS), and a percentage of housing units with outstanding payments with respect to the total of main housing units in 2011 (LOANS). Both variables are expected to act positively over HOB since an important percentage of real estate transactions during the bubble period were artificially fostered by bubble conditions and, therefore, hazard rates linked to mortgage payments were quite important.

Tab. 2: Correlation among variables

	HOB	GDP	CAPITAL	UNEMP	UNEMPCHG	SERVICES	FOREIGN	FOR_CHG	YOUNG	TRANS	LOANS
HOB	1.0000										
GDP	0.0137	1.0000									
CAPITAL	0.2770*	0.0341	1.0000								
UNEMP	0.2896*	-0.1229*	0.0545	1.0000							
UNEMPCHG	-0.0418	-0.0110	0.0682	0.1246*	1.0000						
SERVICES	0.3054*	-0.3141*	0.2101*	-0.0107	-0.1884*	1.0000					
FOREIGN	0.3246*	-0.0107	0.2745*	0.3650*	0.1808*	0.1648*	1.0000				
FOR_CHG	0.1097	0.0558	0.2176*	0.0846	0.2050*	-0.1175*	0.2564*	1.0000			
YOUNG	0.7842*	0.0984	0.2084*	0.0751	-0.1617*	0.2444*	0.1262*	-0.0240	1.0000		
TRANS	0.6577*	-0.0646	0.1099	0.3437*	-0.0232	0.3398*	0.3413*	0.0232	0.3003*	1.0000	
LOANS	-0.1115	0.0544	-0.3809*	0.0694	0.2651*	-0.1281*	-0.3768*	-0.1265*	-0.1304*	-0.0115	1.0000

Note: Significant correlations at 10%.
Source: Own elaboration with data from the register of empty housing units acquired by banks of the Catalan Housing Agency, the Catalan Statistical Institute (IDESCAT), the Catalan Cartographical Institute (CCI), the Spanish Ministry of Public Works, and the Spanish Statistical Institute (INE).

In order to give a descriptive overview of the variables used in this paper, we provide a correlation table (see Tab. 2) showing that there are no major problems in terms of correlation between explanatory variables. In addition, we have also controlled for multicollinearity (see CAMERON and TRIVEDI 2010 for details) with negative results. Based on these results, we were able to use all the independent variables in the econometric estimation.

Source: Own elaboration with data from the register of empty housing units acquired by banks of the Catalan Housing Agency, the Catalan Statistical Institute (IDESCAT), the Catalan Cartographical Institute (CCI), the Spanish Ministry of Public Works, and the Spanish Statistical Institute (INE).

3.2 Methods

According to the characteristics of our dependent variable (i.e., HOB by municipality) the econometric methodology that fits better corresponds to count data models (CDM). This is because of the dependent variable has a Poisson distribution (see Fig. 1) rather than a normal one, which makes inappropriate using alternative estimations procedures such as OLS.

CDM are especially useful when the events being analysed (i.e., the number of housing units owned by large private landlords) are recorded at a highly disaggregated territorial level (e.g., municipalities) as in the large dataset used in our study (i.e., it includes 213 Catalan municipalities). Our econometric strategy consists of two stages:

- In the first stage we analyse the effects of the first four dimensions over HOB (agglomeration economies, socioeconomic conditions, human capital, and real state characteristics).
- In the second one we focus on bank specificities in terms of accumulation of foreclosures at the municipal level.

In this paper we assume that the dependent variable (i.e., the number of HOB) has a random Poisson distribution in which the parameter λ_i is related to the regressor vector x_i that measures site characteristics. Concretely, we assume that the probability of an eviction depends on the specific characteristics of the municipality:

$$Pr(y_i|x_i) = \frac{e^{-\lambda_i}\lambda^{y_i}}{y_i!}, y_i = 0, 1, 2, ..., n$$

where λ_i is dependent on the vector of explanatory variables (municipality characteristics including vectors for agglomeration economies, socioeconomic conditions, human capital characteristics and real estate characteristics):

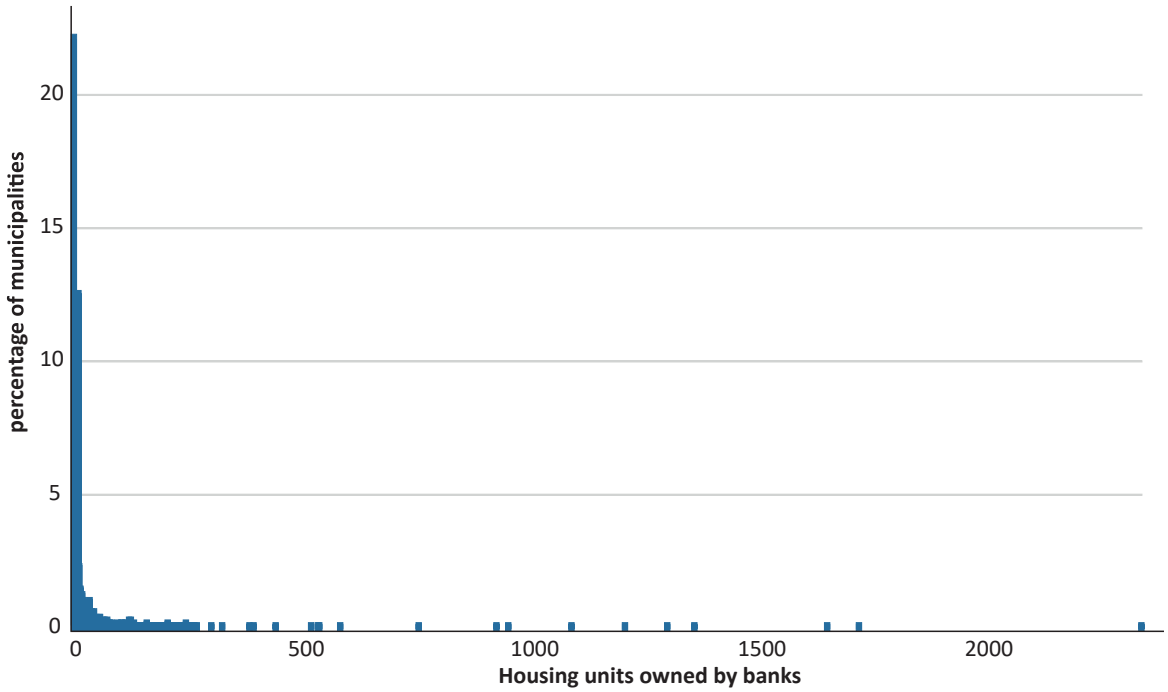

Fig. 1. Distribution of HOB. Source: own elaboration with data from the register of empty housing units belonging to large private landlords of the Catalan Housing Agency.

$$ln\lambda_i = \beta' x_i$$

and β denotes a vector of coefficients of explanatory variables to be estimated. An assumption of Poisson models is that conditional mean and variance functions equal λ_i:

$$E[y_i|x_i] = var[y_i|x_i] = \lambda_i$$

But descriptive statistics presented in Table 3, in which are compared our sample of municipalities (i.e., those larger than 5,000 inhabitants) and all Catalan municipalities, indicate that there is overdispersion, as standard deviation exceeds the mean.

In these cases, a common solution is to use a Negative Binomial Model (NBM), a generalized version of the Poisson model that introduces the unobserved effect into the conditional mean:

$$ln\lambda_i = \beta' x_i + \varepsilon_i$$

where ε_i shows some cross-sectional heterogeneity with $\exp(\varepsilon_i)$ having a υ distribution with mean 1.0 and variance α. As in NBM variance is allowed to exceed the mean, then variance is as follows:

$$var[y_i|x_i] = E[y_i|x_i]\{1 + aE[y_i|x_i]\}$$

The traditional NBM has the same distributional assumptions as the Poisson distribution, with the exception of a dispersion parameter (Hilbe, 2014). Overall, for this particular case the existence of overdispersion as well as the results from AIC and BIC support using NBM instead of a standard Poisson model (PM). Other inflated versions such as ZIP or ZINB are not needed in view that there is no zero inflation of the dependent variable.

Tab. 3: Descriptive statistics about HOB distribution by municipalities in Catalonia

Area	Mean	Standard deviation	Min	Max	% of zeroes
Selected municipalities (213)	154.6714	297.0693	6	2349	0
All Catalan municipalities (947)	39.3981	153.9832	0	2349	22.18

Source: Own elaboration with data from the register of empty housing units acquired by banks of the Catalan Housing Agency.

4 Results and discussion

4.1 The uneven geography of housing accumulated by banks in Catalonia

The geographical distribution of housing units owned by large private landlords is key to understand the spatial logics of the ongoing expansionist phase led by structured bulk sales of bank-owned housing units to global corporate funds, that extract profits from the rental market (Byrne 2019; Nethercorte 2019). Figure 2 shows the spatial distribution of HOB in Catalonia by municipalities (in absolute values) and by counties (values standardised per 1,000 housing units). In general terms, the representation in absolute values and by municipalities not only tends to reflect the urban rank, but also the areas most affected by the "urbanization tsunami" during the bubble boom years (Domènech and Gutiérrez 2018; Méndez and Plaza 2016). Thus, in the first place, Barcelona (2,349 HOB) and its metropolitan environment, the coastal municipalities and the provincial capitals with their corresponding urban systems (Lleida -1,212-, Tarragona -1,094- and Girona -521-) stand out over the rest of the municipalities. Similarly, the geographical distribution of HOB shows high values in medium-sized cities (between 15,000 and 70,000 inhabitants) in the inland and southern parts of Catalonia, such as the county capitals of Amposta (385), Balaguer (245), Figueres (325), Manresa (585), Mollerussa (251), Tortosa (443) and Vic (245).

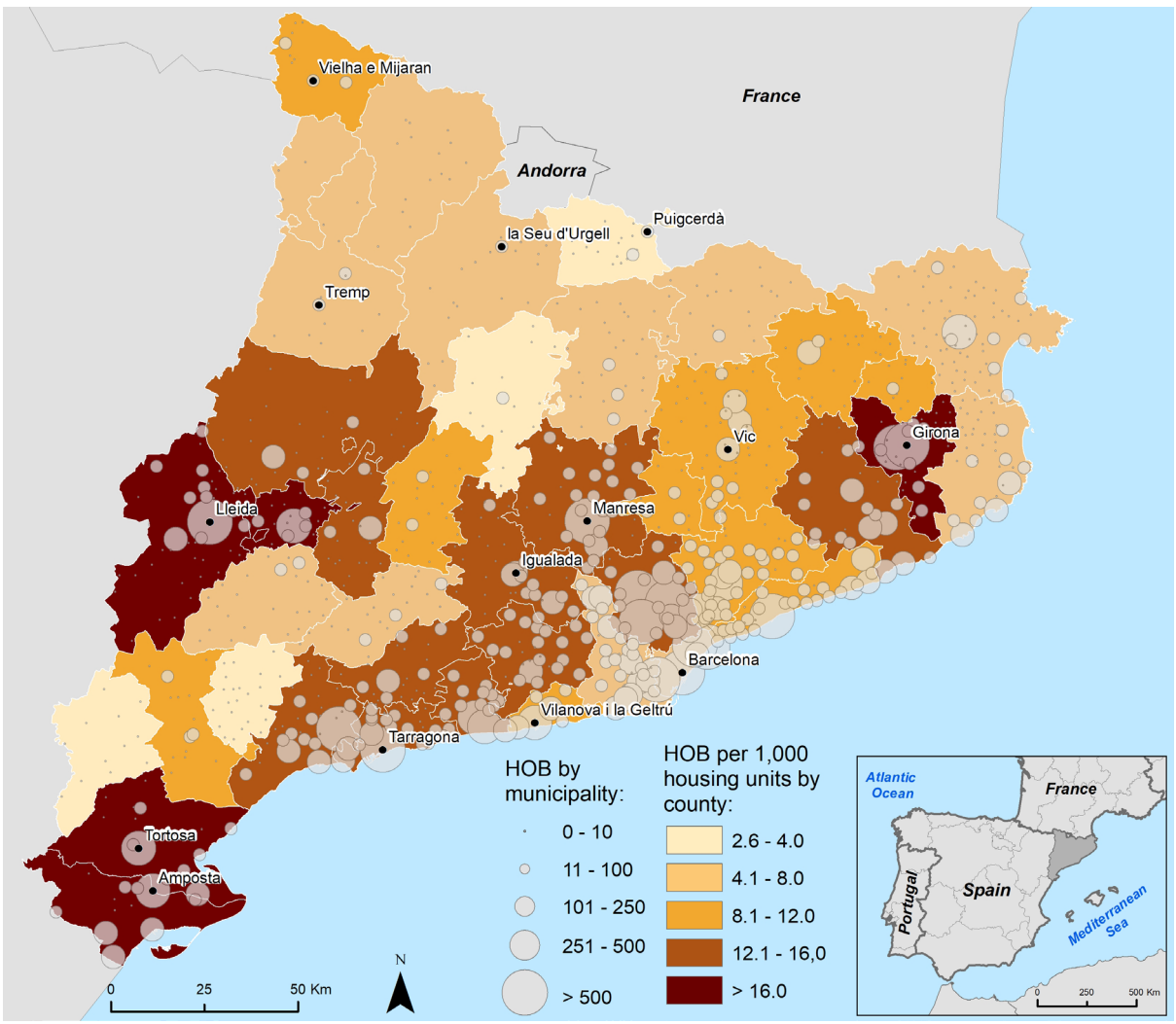

Fig. 2: Spatial distribution of HOB by municipalities (in absolute values) and by counties (values standardised per 1,000 housing units). Source: Own elaboration with data from the register of empty housing units acquired by banks from the Catalan Housing Agency and the Catalan Cartographical Institute (CCI)

Analogously, the observation of relativised values by county provides a clear sign of uneven geographical distribution of housing in hands of banks. These territories correspond to the areas of expansion of the metropolitan region of Barcelona to the inland areas of Catalonia, but also in both northern and southern seaside areas. These spillover effects are also reflected in small and medium-sized inland cities (county capitals such as Figueres, Igualada and Manresa), but also in municipalities in their immediate surroundings. Of particular note is the urban crown of the city of Lleida, where not only other capitals of county, such as Tàrrega, Balaguer and Mollerussa present both high relative and absolute values, but also municipalities with less than 10.000 inhabitants, influenced by the dynamics of these county capitals, that were highly exposed to overindebtedness and were object of speculative urban projects.

However, the most intense impact is manifested in the southern municipalities (Amposta, Deltebre, Sant Carles de la Ràpita, Tortosa and Ulldecona), that perceived the rapid growth of construction, along with the tourist potential of the Ebre Delta, a haven for profitable investment and income generation in a region with low economic dynamism (Domènech and Gutiérrez 2018).

4.2 Socio-spatial logics of housing stock accumulation at municipal level

The spatial logics of the empty housing units accumulated by banks and the SAREB shown in the previous section intrinsically reveal the social inequalities of the region under analysis (Catalonia). The econometric territorial approach followed has allowed us to confirm previous expectations, as most of previously detailed local characteristics (i.e., agglomeration economies, economic conditions, human capital characteristics and real estate characteristics) strongly determine the number of HOB.

Concretely, as can be seen in Table 4, a parsimonious strategy was followed, in which we departed from a baseline count data specification with only two covariates (i.e., unemployment rate and GDP per capita) and then we added progressively the other explanatory variables. These estimations are quite robust since all the variables keep their sign and significance across the different versions. There is only the exception of GDP per capita that loses significance from the second specification on, and the percentage of housing units with outstanding payments with respect to the total of main housing units in 2011 (LOANS), that also loses significance in one specification.

Regarding agglomeration economies, these partially explain number of HOB as both variables included in this category have an unequal impact. In this sense, whilst being capital of the county where the municipality is located (CAPITAL) positively affects the accumulation of housing in hands of large private landlords, GDP per capita (GDP) is only significant for the first (baseline) specification where HOB are hypothesized to be explained only in terms of GDP per capita and unemployment (UNEMP). Then, when additional covariates are used, previous explanatory power of GDP is absorbed by these new covariates, suggesting complexity of foreclosures' phenomenon. These results go in line with those obtained by Gutiérrez and Vives-Miró (2018). Specifically, they detected a negative correlation between the values of gross disposable household income per inhabitant per municipality and the ratio of HOB per 1,000 housing units. However, they concluded that not only the GDP plays a key role but, more importantly, the variables related to socioeconomic vulnerability are the most important ones. The role of county capital is explained according to location of public and private services in these municipalities that, in addition to attract residents, pushes up clustering of inequalities and increases exposure to evictions via mortgage foreclosure.

Economic conditions are captured by the unemployment rate in 2011 (UNEMP), the change in unemployment between 2001 and 2011 (UNEMPCHG) and the percentage of workers employed in service industries in 2011 (SERVICE). Among these variables, unemployment is the one that has a persistent positive effect over HOB. This is a logical and expected result as capacity of residents to afford mortgage payments is lowered in areas with higher unemployment levels (Gutiérrez and Delclòs 2016; Domènech and Gutiérrez 2018), as unemployment pushes available income down. Nevertheless, increase in unemployment (i.e., increased unemployment rates, according to our data) does not affect significantly the number of HOB, which may be explained because new unemployed workers are randomly distributed across all municipalities in view of magnitude and geographical scope of recent economic crisis in Catalonia. Finally, positive effect of employment in services over HOB corroborates that more unstable and ex-

Tab. 4: Determinants of HOB: baseline specifications

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
GDP	0.0242***	0.00367	0.00461	0.00787	0.00789	-0.00281	-0.00236	-0.00290	0.000761
	(0.00716)	(0.00588)	(0.00543)	(0.00475)	(0.00477)	(0.00336)	(0.00339)	(0.00329)	(0.00346)
UNEMP	29.67***	28.36***	22.03***	15.36***	14.98***	15.64***	15.66***	15.18***	16.44***
	(2.767)	(2.460)	(2.613)	(2.316)	(2.381)	(1.839)	(1.816)	(1.787)	(1.800)
CAPITAL		1.132***	0.900***	1.128***	1.161***	0.563***	0.537***	0.490***	0.398***
		(0.163)	(0.161)	(0.146)	(0.154)	(0.119)	(0.120)	(0.117)	(0.116)
FOREIGN			7.596***	3.908**	4.258**	5.133***	4.697***	4.261***	3.774***
			(1.420)	(1.210)	(1.322)	(1.009)	(1.032)	(1.021)	(1.007)
TRANS				0.000160***	0.000159***	0.000110***	0.000111***	0.000118***	0.000111***
				(0.0000219)	(0.0000218)	(0.0000222)	(0.0000225)	(0.0000218)	(0.0000200)
LOANS					0.434	1.877***	1.524**	1.650**	1.502**
					(0.640)	(0.512)	(0.555)	(0.542)	(0.529)
YOUNG						0.0000494***	0.0000527***	0.0000500***	0.0000418***
						(0.0000105)	(0.0000111)	(0.0000102)	(0.00000848)
UNEMPCHG							0.000552	0.000335	0.000504
							(0.000338)	(0.000338)	(0.000334)
FOR_CHG								0.0864**	0.0927**
								(0.0293)	(0.0291)
SERVICES									1.094**
									(0.346)
Cons.	0.684	1.004**	1.055**	1.660***	1.498***	0.948***	0.918**	0.816**	-0.0543
	(0.402)	(0.348)	(0.330)	(0.289)	(0.375)	(0.288)	(0.288)	(0.281)	(0.387)
lnalpha_cons	-0.0536	-0.243**	-0.364***	-0.658***	-0.659***	-1.158***	-1.169***	-1.220***	-1.267***
	(0.0867)	(0.0884)	(0.0895)	(0.0923)	(0.0923)	(0.0977)	(0.0977)	(0.0985)	(0.0992)
N	213	213	213	213	213	213	213	213	213
AIC	2482.1	2434.4	2405.4	2335.5	2337.1	2226.1	2225.5	2216.7	2209.1
BIC	2495.5	2451.2	2425.6	2359.1	2364.0	2256.4	2259.1	2253.7	2249.4

Notes: a The dependent variable is the number of HOB
*** Significance at 1%, ** significance at 5% and * significance at 10%. Standard errors between brackets.
Source: Own elaboration with data from the register of empty housing units acquired by banks of the Catalan Housing Agency, the Catalan Statistical Institute (IDESCAT), the Catalan Cartographical Institute (CCI), the Spanish Ministry of Public Works, and the Spanish Statistical Institute (INE).

posed labour markets are those related with service activities. In fact, although service industries are heterogeneous in terms of wages and workforce stability, in general terms there is a clear specialization towards wages and employment conditions of lower quality. Furthermore, the employment in service industries tends to be more seasonal than in manufacturing. All this considered, higher is the local specialization in these industries higher has been the exposure of households to evictions via mortgage foreclosure and, consequently, higher has been the accumulation of stock in hands of large private landlords.

Human capital characteristics are represented by the percentage of immigrants from non-OECD countries in 2011 (FOREIGN), the change in immigration between 2001 and 2011 (FOR_CHG), and the percentage of young population in 2011 (YOUNG). Some authors state that one of the main drivers of the housing boom was the increment of immigration (Raya 2018). Gonzalez and Ortega (2013) calculate that the increase of immigration was responsible for an annual rise in housing prices of about 2% and for a 1.2-1.5% increase in the construction of housing units. However, comparing the results obtained in this study, it seems that the percentage of foreign population is more important than flows in terms of their effects over HOB. Our economic intuition of the lower influence of change in immigration suggests that new immigrants go to the renting market instead of buying a property, which is an investment decision hard to take just upon arrival to the country.

In general terms, our results confirm expectations as clustering of immigration for low-income countries and demographic structures with young families are overexposed to evictions via mortgage foreclosure in view of their lower income patterns (Gutiérrez and Domènech 2018; Díaz-Serrano and Raya 2014; Rugh and Massey 2010). In that sense, signs and significance are robust for all specifications.

Finally, real estate characteristics are proxied through number of transactions (TRANS) at peak period of real estate bubble (2004-2007) and the percentage of housing units with outstanding payments with respect to the total of main housing units in 2011 (LOANS). Our results corroborate previous expectations related to inflation of real estate transactions during peak periods of bubble that included risky operations with buyers considerably exposed to mortgage unpayments and, consequently, ulterior home evictions (Gutiérrez and Domènech 2017). Obviously, these results do not indicate that evictions are solely generated from initial real estate transactions during the real estate bubble, but that high levels of transactions then have had an effect some years later.

To sum up, the results of the econometric approach confirm that the amount of housing units accumulated by banks via foreclosures is greater in those municipalities with higher socioeconomic vulnerability (that also were highly exposed to credit risk during the real estate bubble). It is important to notice that except GDP pc all covariates are robust to the introduction of additional explanatory variables, as there are no sign or significance changes.4.3. The key role of rescued banks and the SAREB

The Spanish state-led crisis resolution cannot be explained without the important role exerted by the banking sector and the strategy designed to create the financial structure needed to forge the next stage of the housing cycle (García-Lamarca 2020; Vives-Miró and Gutiérrez 2017). Massive asset devaluation, rental law liberalisations and reformulation of REITs to be an effective property investment tool were the three pillars of the strategy to foster the growth of the rental market via foreign capital investments. Therefore, the acquisition of housing stock by banks via mortgage foreclosure has been a phenomenon boosted by the processes of restructuring and sanitising of the Spanish financial sector (Alexandri and Janoschka 2018).

In this context, we checked whether all banks behaved in the same way or if contrarily those that were rescued with higher amounts of public funds also concentrated a higher amount of HOB. This is a very relevant issue, as the rescue with public funds of the Spanish banking system totalled around €60,000M that were unequally distributed across main banks, as presented in Table 5. In addition to banks, there is another main player in this process, the SAREB.

According to official data shown in Table 5, the two banks that have received the highest amount of public funds are Bankia (€24,314M.) and BBVA (€13,005M.), which accumulate 61% of the total public resources used for the rescue and, at the same time, accumulate 16,644 empty homes (over 50% of the total).

In order to identify whether there are bank specific effects that may imply a different effect in terms of HOB accumulated in specific municipalities,

Tab. 5: Relationship between homeowners and public funds received

	HOB	%	Official rescue (M. €)	%
BBVA	10,352	41.5%	13,005 (1)	21.2%
Bankia	6,292	25.2%	24,314 (2)	39.5%
Caixabank	2,935	11.8%	6,475 (3)	10.5%
Santander	3,222	12.8%	0	0.0%
Other banks	2,163	8.7%	17,701 (4)	28.8%
Total banks	24,964 (5)	100.0%	61,495	100.0%

Note:(1) Rescue of Catalonia Bank, acquired by BBVA. (2) Rescue to Bankia and Banco Mare Nostrum, absorbed by Bankia. (3) Aid to Banco de Valencia and Grup Banca Cívica, acquired by Caixabank. (4) Rescue of CAM, acquired by Banc de Sabadell, and other banks (UCI Financiera, Cajas Rurales Unidas, Abanca, Credit Agricole, Caja 3, Unicaja, Liberbank, Cajasur, Kutxabank, CGD, Targonank and Caja de Arquitectos). (5) Total banks (24,964) do not include housing units owned by SAREB (5,757), Securization funds (1,569) and other societies (651).

Source: adapted from Gutiérrez and Vives-Miró 2018

Tab. 6: Determinants of HOB by municipality: banks specifications

	(1)	(2)	(3)	(4)	(5)
BBVA	-0.0633				
	(0.779)				
Bankia		2.267**			
		(0.808)			
Caixabank			-5.927***		
			(0.765)		
Santander				-4.234***	
				(1.218)	
SAREB					3.089***
					(0.881)
Cons.	5.061***	4.637***	5.655***	5.484***	4.541***
	(0.258)	(0.155)	(0.119)	(0.157)	(0.153)
lnalpha_cons	0.270**	0.239**	0.125	0.233**	0.225**
	(0.0839)	(0.0842)	(0.0852)	(0.0842)	(0.0843)
N	213	213	213	213	213
AIC	2569.9	2561.3	2528.9	2559.4	2557.2
BIC	2580.0	2571.4	2539.0	2569.5	2567.3

Notes: The dependent variable is the number of HOB by municipality
*** Significance at 1%, ** significance at 5% and * significance at 10%. Standard errors between brackets.
Source: Own elaboration with data from the register of empty housing units acquired by banks (Catalan Housing Agency).

we selected the main four Spanish banks (BBVA, Bankia, Caixabank and Santander) plus SAREB and we regressed HOB controlling by these owners of the housing stock (see Tab. 6). Econometric results clearly show that there is a close relationship between public funds received by rescued banks and number of HOBs, as banks or societies that received funding from Spanish government (i.e., SAREB and Bankia) are the ones that have a positive and significant effect over the number of HOBs, whilst for the rest of banks the effect is negative (significant for Caixabank and Santander). Results for BBVA are somehow unclear as this big bank acquired several smaller banks (most of them rescued with public funds) that had different strategies in terms of real estate markets and foreclosures. Our results show that, the greater is the presence of Bankia and SAREB, the higher is the number of HOB in the municipality. In other words, in the previous section we have identified that the most vulnerable areas are those that tend to concentrate more HOB. Now, we can add that is precisely in those areas where the rescued banks have concentrated their foreclosures. This finding could be explained by the questionable loan practices of banks that finally needed to be rescued with public funds and/or transfer their assets to the SAREB.

Moreover, this finding helps to evidence how the large amount of public funds spent in the rescue of financial sector have been part of the strategy of socialisation of losses and privatisation of future gains. The accumulation of foreclosed housing in the deprived urban areas mainly by rescued banks and the SAREB is the necessary first step for the next phase of the management of the crisis. This next phase implies the recent restructuration of the housing market and a massive sold of property portfolios to global corporate funds (Gutiérrez and Domènech, 2020; Janoschka et al. 2019; Méndez 2018).

5 Conclusions

5.1 Implications of our findings and main contributions

Our study of the Catalan case not only presents new empirical evidence of the spatiality behind the proliferation of evictions due to mortgage foreclosure, but also reveals the social and economic characteristics of the spaces where banks and the SAREB have accumulated empty housing stock via mortgage foreclosure.

The territorial econometrical approach at municipal level used has not been previously applied with the objective of identifying the socio-spatial determinants of the accumulation of stock in hands of large private owners. Therefore, the analysis allowed us to demonstrate and validate that those municipalities in which banks and the SAREB still have a greater accumulation of empty housing share common characteristics related to socioeconomical vulnerability. Concretely, they are areas with a high concentration of people with job placement difficulties, with an important presence of foreign population and with a high exposure to mortgage loans. This shows that the mortgage crisis has tended to deepen the existing social and spatial inequalities (Alexandri and Janoschka 2018) and points to the emergence of new negative spillover effects (Kim and Cho 2016) such as processes of neighbourhood and municipality degradation.

Our findings indicate that, the higher is the relative presence of foreclosed housing owned by rescued banks -mainly, former Bankia- and the SAREB the higher is the overall number of foreclosed properties in those municipalities. Conversely, the higher is the number of housing owned by non-rescued banks the lower is the overall number of foreclosed housing. This finding, combined with the previous one, indicates that the rescued entities have concentrated their mortgage loans and foreclosures in the most precarious areas of Catalonia. Therefore, it seems reasonable to demand stricter regulations about activities carried out by institutions rescued with public funds. In fact, the way the state-led crisis resolution has been a lost opportunity to convert the housing stock acquired via mortgage foreclosure in social housing, which is less than two percent of the total housing stock in Catalonia (Trilla 2014).

Finally, as we already know that these assets have been (or are being) sold to global corporate landlords (García-Lamarca 2020; Janoschka et al., 2019), our study allows to predict some of the areas where these companies would concentrate their action in the forthcoming years. In that case, low- and middle-income urban areas will be again affected, producing new evictions and forced displacements, but this time due to the rental market bubble (Pareja-Eastway and Sanchez-Martinez 2017).

5.2 Limitations of the study and future research agenda

The main limitations of our study derive from the data source used. As mentioned in the data and methods section, the information we worked with did not represent all the housing accumulated via mortgage foreclosure, but the empty housing stock accumulated by banks and the SAREB as of March 2016. Although it represents around 40% of the total number of evictions due to foreclosure that took place in Catalonia between 2008 and 2015 (Gutiérrez and Vives-Miró 2018). Hence, the data source did not allow us to fully monitor a dynamic process. Nevertheless, it offered us a view of the footprint of mortgage foreclosure in Catalonia, and provides an insight of the urban areas that could concentrate the action of global corporate landlords in the forthcoming years.

The role of these new large private landlords in the management of the housing stock after the crisis has been deeply analysed from a theoretical perspective in different western countries (Alexandri and Janoschka 2018; Beswick et al. 2016; Byrne 2019; Fields, 2018; Pawson and Martin, 2020), but just a few of them has empirically dealt with its socioeconomic spatial logics (García-Lamarca 2020, Gutiérrez and Domènech 2020). Hence, more research is needed to, in the first place, identify the areas of action of global corporate landlords along with further studies on business strategies and long-term objectives of the sector. And, in the second place, unravel the unequal impacts that rental property investment is having in disadvantaged areas (municipalities and neighbourhoods). A recent study carried out by García-Lamarca (2020) in the city of Barcelona demonstrates that corporate landlords such as Blackstone are offering housing in low-income neighbourhoods at a letting price higher than the average surroundings with serious problems of quality and service to their tenants. It is, therefore, uncertain the long-term strategy of these new global actors. However, further research on their predominant position in the housing sector as large homeowners should be carried out, since it may impact not

only the microeconomics of cities but also may have global socio-economic and political urban housing effects (Méndez 2018; Moreno 2014).

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References

Aalbers, M. B. (2019). Financial geography II: financial geographies of housing and real estate. In: Progress in Human Geography 43 (2), 376–387. https://doi.org/10.1177/0309132518819503

Alexandri, G. and Janoschka, M. (2018): Who loses and who wins in a housing crisis? Lessons from Spain and Greece for a nuanced understanding of dispossession. In: Housing Policy Debate 28 (1), 117–134. https://doi.org/10.1080/10511482.2017.1324891

Beswick, J.; Alexandri, G.; Byrne, M.; Vives-Miró, S., Fields, D.; Hodkinson, S. and Janoschka, M. (2016): Speculating on London's housing future. The rise of global corporate landlords in 'post-crisis' urban landscapes. In: Cities 20 (2) 321–341. https://doi.org/10.1080/13604813.2016.1145946

Byrne, M. (2015): Bad banks: the urban implications of asset management companies. In: Urban Research & Practice 8 (2), 255–266. https://doi.org/10.1080/17535069.2015.1050208

Byrne, M. (2019): Generating rent and the financialization of housing: a comparative exploration of the growth of the private rental sector in Ireland, the UK and Spain. In: Housing Studies 35 (4), 743–765. https://doi.org/10.1080/02673037.2019.1632813

Burriel, E. (2014): El estallido de la burbuja inmobiliaria y sus efectos en el territorio. In Albertos, J. M. and Sánchez, J. L. (eds.), Geografía de la crisis económica en España. València.

Cameron, A. C. and Trivedi, P. K. (2010): Microeconometrics using Stata. Midtown.

Díaz-Serrano, L. and Raya, J. M. (2014): Mortgages, immigrants and discrimination: an analysis of the interest rates in Spain. In: Regional Science and Urban Economics 45, 22–32. https://doi.org/10.1016/j.regsciurbeco.2013.12.004

Domènech, A. and Gutiérrez, A. (2018): Paisatges després de la batalla. Geografies de la crisi immobiliària. Barcelona.

Fields, D. (2018): Constructing a new asset class: property-led financial accumulation after the Crisis. In: Economic Geography 94 (2), 118–140. https://doi.org/10.1080/00130095.2017.1397492

Fields, D. and Hodkinson, S. (2018): Housing policy in crisis: an international perspective. In: Housing Policy Debate 28 (1), 1–5. https://doi.org/10.1080/10511482.2018.1395988

García-Hernández, J. S. and Ginés-De la Nuez, C. (2020): Geografías de la desposesión en la ciudad neoliberal: ejecuciones hipotecarias y vulnerabilidad social en Santa Cruz de Tenerife (Canarias-España). In: EURE – Revista Lationoamericana de Estudios Urbano Regionales, 46 (138), 215–234. https://doi.org/10.4067/S0250-71612020000200215

García-Lamarca, M. (2020): Real estate crisis resolution regimes and residential REITs: emerging socio-spatial impacts in Barcelona. In: Housing Studies. https://doi.org/10.1080/02673037.2020.1769034

González, L. and Ortega, F. (2013): Immigration and housing booms. Evidence from Spain. In: Journal of Regional Science 53 (1), 37–59. https://doi.org/10.1111/jors.12010

González-Pérez, J. M.; Vives-Miró, S. and Rullán, O. (2020): Evictions for unpaid rent in the judicial district of Palma (Majorca, Spain): a metropolitan perspective. In: Cities 97, 1–12. https://doi.org/10.1016/j.cities.2019.102466

Gutiérrez, A. and Arauzo-Carod, J. M. (2018): Spatial analysis of clustering of foreclosures in the poorest-quality housing urban areas: evidence from Catalan cities. In: International Journal of Geo-Information 7 (1), 1–23. https://doi.org/10.3390/ijgi7010023

Gutiérrez, A. and Delclòs, X. (2016): The uneven distribution of evictions as new evidence of urban inequality: a spatial analysis approach in two Catalan cities. In: Cities 58, 101–108. https://doi.org/10.1016/j.cities.2016.04.007

Gutiérrez, A. and Domènech, A. (2017): Geografía de los desahucios por ejecución hipotecaria en las ciudades españolas: evidencias a partir de las viviendas propiedad de la SAREB. In: Revista de geografía Norte Grande 67, 33–52. https://doi.org/10.4067/S0718-34022017000200003

Gutiérrez, A. and Domènech, A. (2018): The mortgage crisis and evictions in Barcelona: identifying the determinants of the spatial clustering of foreclosures. In: European Planning Studies 26 (10), 1939–1960. https://doi.org/10.1080/09654313.2018.1509945

Gutiérrez, A. and Domènech, A. (2020): Identifying the socio-spatial logics of foreclosed housing accumulated by large private landlords in post-crisis Catalan Cities. In: ISPRS International Journal of Geo-Information 9, 313. https://doi.org/10.3390/ijgi9050313

Gutiérrez, A. and Vives-Miró, S. (2018): Acumulación de viviendas por parte de los bancos a través de los desahucios: geografía de la desposesión de vivienda en Cataluña. In: EURE – Revista Lationoamericana de Estudios Urbano Regionales 44 (132), 5–26. https://doi.org/10.4067/s0250-71612018000200005

Hilbe, J. (2014). Modeling count data. New York.

Immergluck, D. and Smith, G. (2006): The impact of single-family mortgage foreclosures on neighborhood crime. In: Housing Studies 21, 851–866, https://doi.org/10.1080/02673030600917743

Janoschka, M; Alexandri, G.; Orozco Ramos, H. and Vives-Miró, S. (2019): Tracing the socio-spatial logics of transnational landlords' real estate investment: Blackstone in Madrid. In European Urban and Regional Studies. https://doi.org/10.1177/0969776418822061

Kenna, P.; Benjaminsen, L.; Busch-Geertsema, V. and Nasarre-Aznar, S. (2016): Promoting protection of the right to housing – Homelessness prevention in the context of evictions. Luxembourg.

Kim, J. and Cho, G-H. (2020): Unending foreclosure crisis: uneven housing tenure trajectories of post-REO properties. In: Applied Geography 70, 49–58. https://doi.org/10.1016/j.apgeog.2016.03.003

Libman, K.; Fields, D. and Saegert, S. (2012): Housing and health: a social ecological perspective on the US Foreclosure Crisis. In: Housing, Theory and Society 29, 1–24, https://doi.org/10.1080/14036096.2012.624881

Lin, Z.; Rosenblatt, E. and Yao, V. W. (2009): Spillover effects of foreclosures on neighborhood property values. In: The Journal of Real Estate Finance and Economics 38, 387–407, https://doi.org/10.1007/s11146-007-9093-z

Medina, R. M.; Byrne, K.; Brewer, S. and Nicolosi, E. A. (2020): Housing inequalities: eviction patterns in Salt Lake County, Utah. In: Cities 104. https://doi.org/10.1016/j.cities.2020.102804

Méndez, R. (2018): La telaraña financiera. Una geografía de la financiarización y sus crisis. Santiago de Chile.

Méndez, R. and Plaza, J. (2016): Crisis inmobiliaria y desahucios hipotecarios en España: una perspectiva geográfica. In: Boletín de la Asociación de Geógrafos Españoles 71, 99–127. https://doi.org/10.21138/bage.2276

Moreno, L. (2014): The urban process under financialised capitalism. In: City 18, 244–268. https://doi.org/10.1080/13604813.2014.927099

Nethercorte, M. (2019): Build-to-rent and the financialization of rental housing: future research directions. In: Housing Studies. https://doi.org/10.1080/02673037.2019.1636938

Pawson, H. and Martin, C. (2020): Rental property investment in disadvantaged areas: the means and motivations of Western Sydney's new landlords. In: Housing Studies. https://doi.org/10.1080/02673037.2019.1709806

Pareja-Eastaway, M. and Sanchez-Martinez, M. T. (2011): El alquiler: una asignatura pendiente de la Política de Vivienda en España. Ciudad y Territorio. In: Estudios Territoriales 167, 53–70. https://www.eukn.eu/fileadmin/Lib/files/ES/2011/03_CyTET_167.pdf

Parreño-Castellano, J. M.; Domínguez-Mujica, J.; Armengol-Martín, M.; Pérez García, T. and Boldú Hernández, J. (2018): Foreclosures and evictions in Las Palmas de Gran Canaria during the economic crisis and post-crisis period in Spain. In: Urban Science 2 (4), 109. https://doi.org/10.3390/urbansci2040109

Parreño Castellano, J. M.; Domínguez Mujica, J.; Armengol Martín, M. T.; Boldú Hernández, J. and Pérez García, T. (2019): Real estate dispossession and evictions in Spain: a theoretical geographical approach. In: Boletín de la Asociación de Geógrafos Españoles 80, 2602, 1–25. https://doi.org/10.21138/bage.2602

Plataforma Auditoría Ciudadana de la Deuda (2013): La ilegitimidad de los Rescates a la Banca en el Estado español. http://auditoriaciudadana.net/documents

Raya, J. M. (2018). The determinants of foreclosures: evidences from Spanish case. In: Papers in Regional Science 97 (4), 957–970. https://doi.org/10.1111/pirs.12316

Rugh, J. S. and Massey, D. S. (2010): Racial segregation and the American foreclosure crisis. In: American Sociological Review 75, 629–651. https://doi.org/10.1177/0003122410380868

Trilla, C. (2014): Desigualdad y vivienda. ACE: Architecture. In: City and Environment 9, 95–126. Retrieved from: https://www.raco.cat/index.php/ACE/article/view/281998

Vives-miró, S. and Gutiérrez, A. (2017): Extracting rents through foreclosures: the rescue of Catalunya Banc as a new urban strategy following the burst of the Spanish bubble. In: Miscellanea Geographica 21 (4), 151–159. https://doi.org/10.1515/mgrsd-2017-0030

Waldron, R. (2018): Capitalizing on the state: the political economy of real estate investment trusts and the 'resolution' of the crisis. In: Geoforum 90, 206–218. https://doi.org/10.1016/j.geoforum.2018.02.014

Wang, K. (2020): Neighbourhood foreclosures and health disparities in the U.S. Cities. In: Cities 97. https://doi.org/10.1016/j.cities.2019.102526

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