

30

Barcelona Societat

Journal on social Knowledge and analysis



Ajuntament
de Barcelona

February 2024

Key words: Household typology, rental park, housing affordability crisis, residential insecurity

Housing in Barcelona: needs, parks and accessibility crisis

Carles Donat Muñoz^a

In a context of a global crisis of access to housing, this article analyses the state of the residential system in the city of Barcelona by focusing on four aspects of relevance, which have been worked on by the team of the Barcelona Metropolitan Housing Observatory since its creation in 2017. Firstly, the causes of the stagnation of households in the city during the last intercensal period 2011-2021 are analysed, a situation which breaks a historical trend in the city. Secondly, there is the stagnation of the housing stock and, particularly, of the main housing stock, as well as that intended for rent. Thirdly, the evolution of the housing market is analysed and the distance from the real possibilities of households due to the fact that during the last two decades the average house prices have grown much more intense than the average population income. Finally, the work emphasizes some of the main indicators of accessibility and permanence in housing, such as the theoretical effort to access housing, the rate of housing overload or the reasons for changing housing.

Introduction

Housing has emerged as one of the primary concerns for the citizens of Barcelona, as in many cities worldwide. Indeed, the contemporary housing issue, linked to accessibility, is a common challenge in numerous cities of the global north (European Commission, 2022; OECD, 2021).

However, while there are common processes globally, their translation into different cities varies in intensity. Likewise, the peculiarities of local residential systems have a significant impact on meeting the housing needs of the population. For instance, Barcelona is a city with limited territory, spanning 100 km². Consequently, population growth, household expansion, and construction are constrained by this territorial context, emphasizing the metropolitan integration of the city (Donat, 2016).

Local peculiarities extend beyond physical space to demographic factors such as the notably aging age structure of the population, transformations in cohabitation patterns with a pronounced prevalence of single-person households, and migratory dynamics in a city where migration has often been the main driver of population growth.

Another distinguishing feature of Barcelona, setting it apart from cities in central and northern European countries, is the shortage of housing for social policies, particularly social rental housing.

a. Codirector of the Barcelona Metropolitan Housing Observatory. @CarlesDonat

This is a common characteristic with the residential system of Catalonia and the rest of the country (Donat et al., 2021; Trilla & Bosch, 2018). This scarcity contributes to the intensity of the accessibility crisis in major Spanish cities in general and in Barcelona in particular. However, it is not the sole factor, as in other European cities where the social rental housing stock is higher, housing prices in the open market also deviate significantly from household incomes (Housing Europe Observatory, 2022).

Another unique feature of Barcelona is the existence of a substantial rental housing stock, much higher than the metropolitan, Catalanian, or national averages. While not comparable to rental stocks in other European countries, a 30% rental stock is noteworthy in the context of southern European countries, where homeownership predominates.

These are some of the key characteristics of the residential system in the city of Barcelona, sharing commonalities with other cities globally and within the country, yet possessing distinctive features. With this starting point, the objective of this article is to analyse the recent evolution of some of these themes.

To achieve this, updated data from various sources are presented. Firstly, from censuses, collating information from the recently published 2021 Census. It is important to note that the 2021 census operation relied on a methodology of information compilation from records, differing from previous censuses. This primarily affects the counting of the housing stock, as will be highlighted in the corresponding section. Secondly, updated data on average rental prices by Barcelona neighbourhoods, sourced from INCASÒL rental bonds for the second quarter of 2023, form the basis for access effort calculations. Finally, it is essential to mention the inclusion of the latest data from the Metropolitan Survey of Living Conditions, 2021-2022 edition, and the Urban Cohesion Survey, 2022. These are two extraordinary sources in the Spanish statistical context, providing historical series for analysing various elements related to the living conditions of the population, particularly those related to housing.

Following this introduction, the article consists of six sections. The first section analyses the demographic foundations used to quantify housing needs, i.e., population and households, as well as the main factors explaining their recent evolution. The second section delves into changes in cohabitation patterns, a highly impactful aspect precisely in the evolution of households. The third section studies the evolution of the housing stock, specifically the primary housing stock, with special attention to tenure regimes. The fourth section delves into issues related to the accessibility problem, first contrasting the evolution of the average incomes of the population with the average prices of housing and, secondly, with calculations of access effort to rental housing. The fifth section focuses on the economic costs that housing imposes on households and the increased residential instability, especially for households in rental accommodation. Finally, a few paragraphs present the article's conclusions.

1. Demographic Foundations of Housing Needs: Migrations and Age Structure

The analysis of population and household dynamics allows understanding the demographic foundation of housing needs. Based on census data, in 2021, there are 671,177 households in Barcelona (Table 1), representing a decrease of 12,901 households compared to the 2011 census, which recorded 684,078 households. Furthermore, this decline contrasts with the significant growth of 89,626 households experienced during the intercensal period of 2001-2011.

Table 1. Population and households in Barcelona. 1981-2021

	1981	1991	2001	2011	2021
Population	1,752,627	1,643,542	1,503,884	1,611,013	1,627,559
Population living in familiar households	-	1,632,590	1,491,609	1,601,935	1,591,164
Households	579,831	576,640	594,452	684,078	671,177
Average size of households	-	2.83	2.51	2.34	2.37

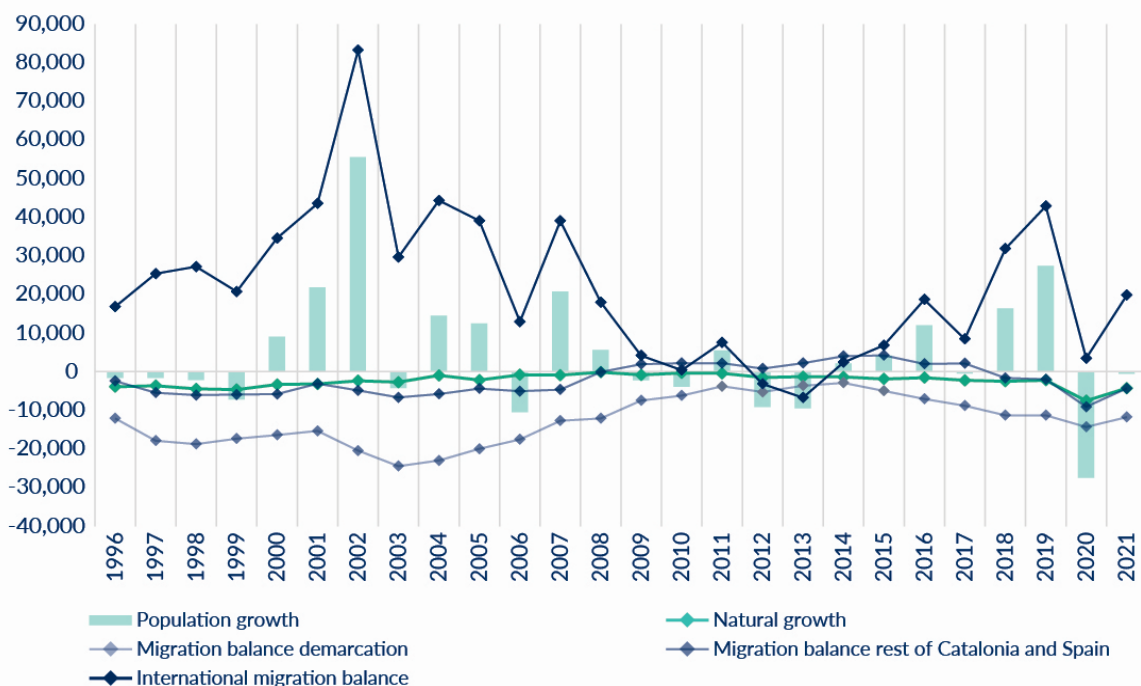
Source: INE, Censos de población y hogares.

Before analysing the causes of this evolution in the number of households, it is important to note that, although census data indicates a decrease in the city's number of households, information extracted from other sources indicates that the most pronounced decline in the number of households occurred at the beginning of the period when the balance due to international migrations approached zero and even became negative¹ in some years. In contrast, in recent years, except for the brief slowdown caused by the Covid-19 crisis, the number of households follows an upward trend.

Indeed, to explain the evolution in the number of households, it is necessary to focus on migratory balances, as well as age structure and changes in living arrangements. These are the main factors behind the generation and destruction of households.

Regarding migrations, during the first half of the 2011-2021 period, as mentioned earlier, there was a decrease in the balance due to international migrations, which has recovered in the second half of the decade (Graph 1). Overall, the balance due to international migrations has resulted in a gain of 112,214 people during the 2011-2021 period. It is worth noting that this increase, while significant, is significantly lower than what occurred in the 2001-2011 intercensal period when 314,430 residents were gained due to the balance of international migrations. Precisely, this difference is one of the main reasons explaining why, during the last intercensal period (2011-2021); the number of households did not experience as notable growth as in the previous intercensal period.

Graph 1. Components of demographic growth in Barcelona. 1996-2021



Source: Author's own elaboration from Idescat, Padró continu de població, Estadística de Variaciones Residenciales and Moviment Natural.

On the other hand, if attention is paid to migrations originating from or heading to another municipality within the province of Barcelona, primarily related to residential reasons, the balances are negative. In other words, there is a net population outflow from Barcelona, resulting in more people and, consequently, more households leaving the city than entering. Specifically, during the period 2011-2021, the migration balance with the rest of the province accounted for a net loss of

1. According to the information on registered addresses prepared by the Municipal Data Office, in 2016 there were 654,979 homes; in 2017, 658,375; in 2018, 660,816; the year 2019, 662,787; the year 2020, 664,476; the year 2021, 660,063; the year 2022, 662,833 and the year 2023, 668,790.

73,275 residents. It is important to note that this decrease has been more moderate than in the previous intercensal period when 159,269 inhabitants were lost.

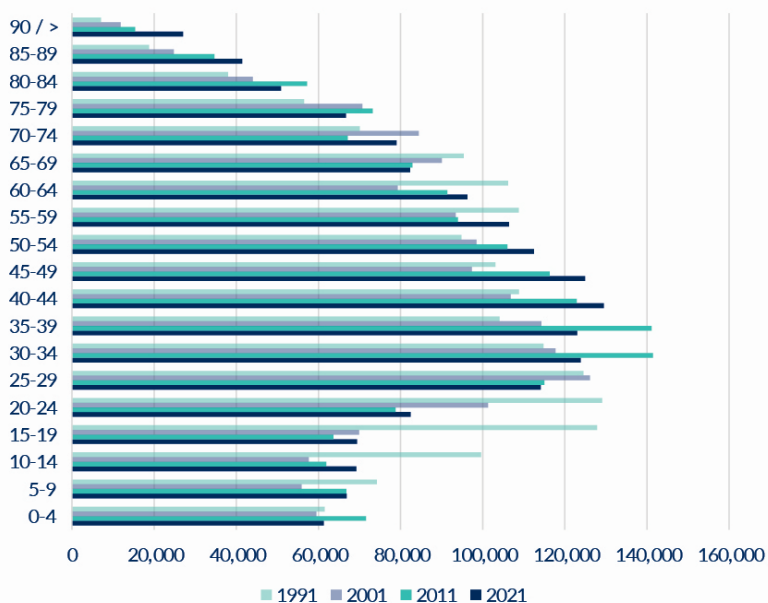
Finally, it should be noted that the migration balance with the rest of Catalonia and Spain has little weight in explaining the population and, consequently, household variations in the city of Barcelona. Thus, in the period 2011-2021, only 4,931 residents were gained for this reason, while in the period 2001-2011, 30,431 were lost.

Overall, the total migration balance for the city of Barcelona during the intercensal period 2011-2021 resulted in a gain of 43,870 inhabitants, whereas during the period 2001-2011, it was 124,460 inhabitants. In conclusion, although Barcelona has seen an increase in residents and, consequently, households during the period 2011-2021 due to migrations, it is important to note a significant slowdown compared to the preceding decade.

Alongside migrations, the second factor with a significant explanatory weight in household evolution is the age structure. On one hand, the number of young individuals indicates the potential number of households to be formed through emancipation, while, on the other hand, the population in the older age groups forecasts household destruction due to mortality.

Focusing initially on the analysis on the youth, it can be observed that in 2011, the cohorts of young individuals potentially expected to emancipate during the subsequent decade had decreased compared to earlier periods (Graph 2). Indeed, in 2011, there were 204,415 young individuals aged between 10 and 24 years (who, during the intercensal period 2011-2021, transitioned to the 20-34 age group), which was 11% less than in 2001 when there were 228,912.

Graph 2. Population by age groups. Barcelona. 1991-2011.



Source: INE, Censos de población.

This decline in the number of young individuals at emancipation ages is compounded by the decrease in emancipation rates over the past decade. This implies that within these age groups, more young individuals have yet to form new households. As a reference point, the emancipation rate of young individuals aged 16 to 29 in Catalonia decreased from 28.9% in 2011 to 19.2% in 2022, nearly a ten-point decrease². Ultimately, the decline in the number of young individuals at emancipation ages, coupled with the retreat in emancipation rates, would be another primary factor explaining the stagnation of the number of households in the city of Barcelona.

2. Source: Observatori Català de la Joventut.

Regarding the population in older age groups, in 2011, there was an increase in the population aged 75 and over, where the probability of death is higher, compared to ten years earlier. Specifically, in 2011, there were 180,555 people in these age groups, 29,152 more than in 2001, when there were 151,403 (Graph 2). In these age brackets, the percentage of single-person households is significant, so the mortality of an individual often leads to the destruction of a household. Thus, despite the increase in life expectancy, the concentration of the population in older ages would have resulted in a greater destruction of households during the period 2011-2021 compared to previous intercensal periods.

Overall, factors related to the age structure of Barcelona play a very significant role in explaining the stagnation in the number of households in the city during the intercensal period 2011-2021. On one hand, although the emancipation process always involves the creation of households, these have been much less numerous than in previous periods. On the other hand, the unprecedented concentration of individuals in older age groups would have been the main driver of household destruction in the city.

As the reader may have inferred, these demographic processes are not isolated from other societal dynamics. For example, international migrations are primarily motivated by economic reasons, while metropolitan migrations are often related to the housing market. In contrast, there are others dynamics that exhibit a more autonomous and predictable demographic behaviour, such as the effect of mortality in older age groups on household destruction. Finally, there are processes, such as emancipation, in which population structure (the number of young individuals at emancipation ages) interacts with material possibilities derived from the labour market and the residential system.

2. Changes in cohabitation patterns and household types

The third factor influencing the evolution of households, in addition to migrations and age structure discussed earlier, is changes in the type of households. In this regard, it is important to consider not only the increase in a specific type of household but also the relationship between the population and households, reflected in the number of people living in each type of household. Thus, for a constant number of inhabitants, the presence of households with low to moderate occupancy, such as single-person households (1 person), results in a higher number of households compared to households with higher average occupancy, such as a couple with children (3.6 persons on average in the household in 2021). Taking the example to the extreme, with a population of one million inhabitants, there would be one million single-person households, but only 276,147 households of couples with children.

Single-parent households are the type that has grown the most in the intercensal period 2011-2021, increasing by 16,271 units, from 77,680 to 93,951 (Table 2). In 2021, they represent 14% of the total number of households. Moreover, this increase has influenced the growth of households in the dual sense just mentioned. First, because they have increased, as evident, but secondly, because they have a low average occupancy, and the growth of this type of household has occurred with less population than if it had been with another type (except single-person households).

On the other hand, non-nuclear households have increased by 13,696 units in the last intercensal period, reaching 50,805 in 2021, representing 7.6%.

In this case, since they have an above-average size (2.7 occupants), it can be said that they benefit less in the double sense being discussed because forming a non-nuclear household requires more population than other types of smaller households.

Table 2. Household Typology. Barcelona. 2001-2021

	2001		2011		2021		Variation 2021-2011		Average dimension 2021
Single	155,463	26.2%	198,052	29.0%	207,972	31.0%	9,920	5.0%	1.0
Couples without children	130,531	22.0%	166,475	24.3%	135,294	20.2%	-31,181	-18.7%	2.0
Single parent household	65,941	11.1%	77,680	11.4%	93,951	14.0%	16,271	20.9%	2.3
With no nucleus	32,913	5.5%	37,109	5.4%	50,805	7.6%	13,696	36.9%	2.7
Couples with children	200,350	33.7%	190,647	27.9%	170,172	25.4%	-20,475	-10.7%	3.6
Multiple households	9,254	1.6%	14,115	2.1%	12,990	1.9%	-1,125	-8.0%	5.7
Total	594,452	100.0%	684,078	100.0%	671,178	100.0%	-12,900	-1.9%	2.4

Source: Idescat, Censo de poblaci3n 2001 and 2011; and author's own elaboration from INE, Censo de poblaci3n 2021.

The third type of household that has experienced significant growth is single-person households, with an increase of 9,920 units. This type is the most common in Barcelona in 2021, with 207,972, accounting for 31%. In fact, the number of single-person households has increased very intensely in recent decades, fostering household growth in the double sense mentioned earlier. Since they have low average occupancy (1 person), the increase has occurred with less population than if it had been another type of household.

As can be inferred, this relationship between the type of household and the people living in it has significant implications for the residential system. It not only indicates how changes in living arrangements are associated with different housing occupancy intensities but also has implications for an aggregated quantification of housing needs. In fact, the increase in single-person households during the last decades is one of the main reasons explaining why, during periods when the population has decreased, such as the 1991-2001 period, the number of households continued to grow. From this perspective, it's essential to note that during the 2011-2021 period, the increase in the number of single-person households has moderated significantly compared to previous intercensal periods, so this factor has ceased to have such a notable impact on the overall evolution of the number of households.

If the analysis focuses on the types of households that have decreased in the last intercensal period, first and foremost, we must highlight childless couple households. In 2021, there are 135,294 households of this type in the city of Barcelona, representing 20.2%, although they have decreased significantly (31,181) since 2011 when there were 166,475. As shown in Table 2, this is the type of household that has decreased the most and logically has a very significant impact on the double sense discussed, as they have a low average occupancy (2 people), below most household types. Moreover, the evolution during the 2011-2021 period has undergone a change in sign compared to the 2001-2011 period, when this type of household had grown significantly. Therefore, this can be considered one of the main reasons, from the standpoint of household typology, for the stagnation of households during the last intercensal period.

The second type of household that has decreased between 2011 and 2021 is couples with children, which has declined by 20,475 units, a very significant decrease continuing the trend of recent decades. Thus, in 2021, there are 170,172 households of couples with children in Barcelona, with an average occupancy of 3.6 people, representing 25.4% of the total. This decrease can be said to have less impact in the double sense being discussed because, with the same population that no longer lives in these households, many more households of other types with smaller dimensions can be formed. Finally, multiple-person households, which have the highest average occupancy (5.7 people), decreased by 1,125 units during the last intercensal period and were 12,990 in 2021, representing only 1.9%.

In conclusion, the types of households that have grown in the 2011-2021 period are single-parent households, non-nuclear households, and single-person households. In the case of single-parent and single-person households, since they have a lower average occupancy, they have a greater impact on total household growth, as fewer people are needed to form these households. However, it is noteworthy that the growth of single-person households has moderated significantly compared

to previous periods. Conversely, the types of households that have decreased are childless couple households, couples with children, and multiple-person households. In this case, the reduction of childless couples, having a lower average occupancy, has a more significant impact, while the reduction of couples with children, also important quantitatively, does not have such a relevant impact on the overall reduction of the number of households.

3. A Declining Stock of Primary Residences with a Decrease in Homeownership

Despite Barcelona being a densely urbanized area, the housing stock has experienced significant growth in recent decades, particularly during the period of the last real estate boom (1996-2007).

If we consider census data, the number of family homes increased from 669,459 in 1991 to 811,106 in 2011, marking a growth of 21.2% (141,647 units) over two decades (Table 3). However, during the last intercensal period, this trend has been interrupted to the extent that the number of family homes has decreased, reaching 808,752 units in 2021.

Table 3. Typology of family homes and tenure regime. Barcelona. 1981-2021

	1981	1991	2001	2011	2021		Variation 2011-2021	
Primary family homes	579,831	576,640	594,451	684,078	671,178	100.0%	-12,900	-1.9%
In property	287,153	354,477	405,090	437,631	409,686	61.0%	-27,945	-6.4%
Renting	268,881	207,199	169,137	205,912	208,467	31.1%	2,555	1.2%
Other tenure regime	23,797	14,964	20,224	40,535	53,025	7.9%	12,490	30.8%
Non-primary family homes	93,675	92,819	163,477	127,028	137,574	-	10,546	8.3%
Total	673,506	669,459	757,928	811,106	808,752	-	-2,354	-0.3%

Source: INE, Censos de población y viviendas

This stagnation in the number of family homes, known as the housing "stock," is not due to a sudden halt in residential construction. In fact, during the period 2011-2021, 12,770 homes³ were completed in the city of Barcelona. Although these figures are far from the construction levels of the real estate boom period (1996-2007), they are significant in an increasingly urbanized territory.

Unfortunately, public information is not available to delve into the figures for processes such as the loss of homes due to demolitions, the creation of homes through divisions, or the dynamics of changing uses—meaning homes that change their function and are allocated for other purposes (offices, tertiary, hotels, etc.). This change in uses has a dual effect, as some properties transition to residential use, while others change from being homes to serving different functions. These limitations are compounded by the methodological change introduced in the last census, where the counting of the housing stock was done through administrative records.

Another noteworthy aspect is the loss of primary residences, as evident from the 2021 census data. Indeed, in 2021, there are 671,178 primary residences, 12,900 fewer than in 2011. In contrast, the number of non-primary residences has increased by 10,546 units, totalling 137,574 in 2021. Non-primary residences, especially unoccupied homes, have been a recurring issue in each census operation, necessitating complementary studies to significantly reduce the count of unoccupied homes compared to census results. It is essential to remember that contrasting the data on unoccupied homes from the latest 2021 census has not yet been done, but based on previous experience, drawing conclusions from census figures would be premature. On the other hand, data from other studies indicate an increase in homes designated for tourist use during the intercensal period 2011-2021, both licensed tourist use homes (HUT) and those offered illegally on specialized portals (Duatis et al., 2016).

Another feature discernible from the population and housing census is the tenure regime of homes, corresponding to the number of primary family homes. In 2021, out of the 671,178 primary family

3. Source: Housing Studies and Documentation Service of the Generalitat de Catalunya, based on the final construction certificates from the colleges of surveyors.

homes, 409,686 (61%) are inhabited by households in ownership, 208,467 (31.1%) in rental, and finally, 53,025 (7.9%) in other regimes. It is noteworthy that in 2021, there are 27,945 fewer households living in ownership compared to 2011, confirming that this type of tenure regime has been declining since the international financial crisis of 2007.

Conversely, there are 2,555 more households living in rental accommodation. Certainly, the increase in rental households already occurred in the 2011 census when 205,912 were recorded. Therefore, what can be deduced from the 2021 census figures is that although the number of new rental contracts counted has continued to grow⁴, the rental housing stock, in contrast, has remained very stable. In other words, the dynamism of the rental market would respond more to turnover within a relatively constant stock than to a net increase in supply.

Finally, regarding the tenure regime, the increase in other regimes, where 53,025 households live, is noteworthy, representing a significant growth of 12,490 households, a 30.8% increase. Unfortunately, the census statistics do not allow distinguishing these different regimes from ownership and rental, and they will need to be disaggregated in subsequent work using other sources.

In conclusion, during the last intercensal period 2011-2021, the housing stock in the city of Barcelona has stagnated, as has the primary housing stock. This dynamic contrast with the trend observed over the past decades, during which the stock had increased significantly. Although, unfortunately, data is not available to verify this, the main hypothesis behind the stagnation of the housing stock in general, and especially primary residences, is related to changes in use. This involves the conversion, through renovations, of properties from residential to offices, tertiary uses, hotels, etc.

4. The Marked Increase in Average Housing Prices and the Widening Gap with Household Real Possibilities.

The trend towards a separation between household incomes and average housing prices, both in the sale of new and existing homes and in rentals, has been observed over the past two decades (Sender et al., 2021). This translates to households, on average, having to allocate a larger portion of their incomes to housing payments. This dynamic is replicated in other European cities and around the world, leading some authors to refer to it as a global housing accessibility crisis (Galster and Lee, 2021; Wetzstein, 2017), with very relevant repercussions on the living conditions of the population (European Commission, 2022; Serme-Morin et al., 2022). In fact, the issue of access to and maintenance of housing not only affects the population with fewer resources but is extending to an increasingly larger segment of the population (OECD, 2021).

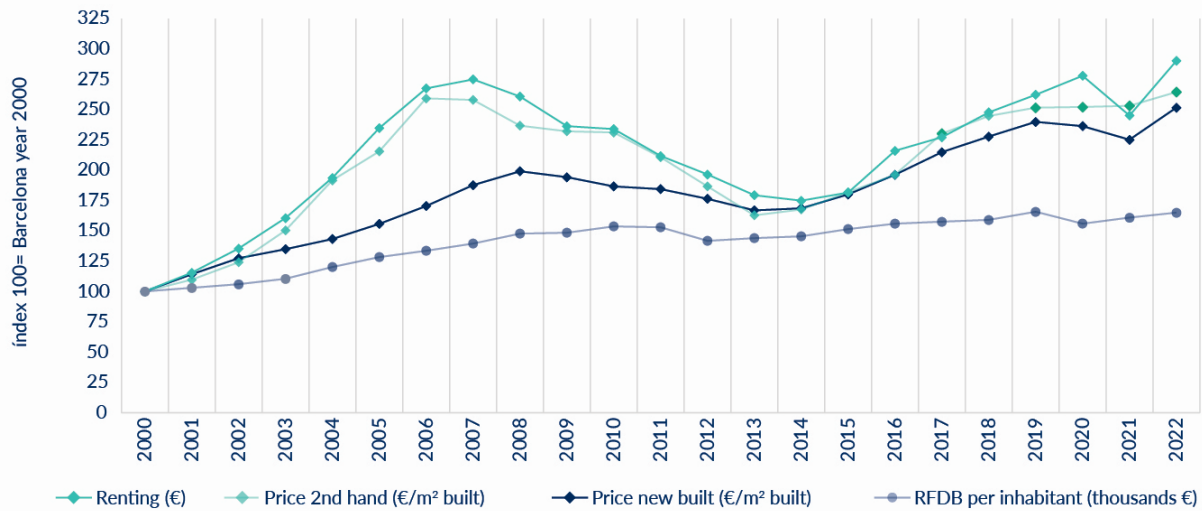
Focusing on the data related to this accessibility crisis in Barcelona, it can be observed that the highly differentiated evolution of individual incomes and average housing prices has not been constant.

Instead, it has undergone different phases closely tied to economic and housing sector cycles (Graph 3): the period 2000-2007, which aligns with the last real estate boom; the period 2007-2013, marked by a burst bubble and an intense economic recession; and finally, the period 2013-2022, characterized by economic recovery and growth, accompanied by price tensions (with the interruption of the Covid crisis between 2020 and 2021).

Nonetheless, during periods of increasing average housing prices, they rise much more intensely than during declines in times of recession, leading to a long-term overall increase in average prices.

4. An example, according to the deposits deposited in INCASÒL, between 2011 and 2021, 503,583 new rental contracts were formalized.

Graph 3. Evolution of Gross Disposable Family Income per Inhabitant and Median Housing Prices. 2000-2021. Barcelona (2000=100)



Source: Author's own elaboration. GDFI: Idescat, 2000-2020 and estimation GDFI 2021-22, from INE and Banco de España, Contabilidad Nacional de España; Average Rental Price: Secretaria d'Habitatge, from deposit registers deposited at INCASÒL; Average Sale Price: Secretaria d'Habitatge 2000-2013 and Secretaria d'Habitatge, 2013-2022, from the Col·legi de Registradors.

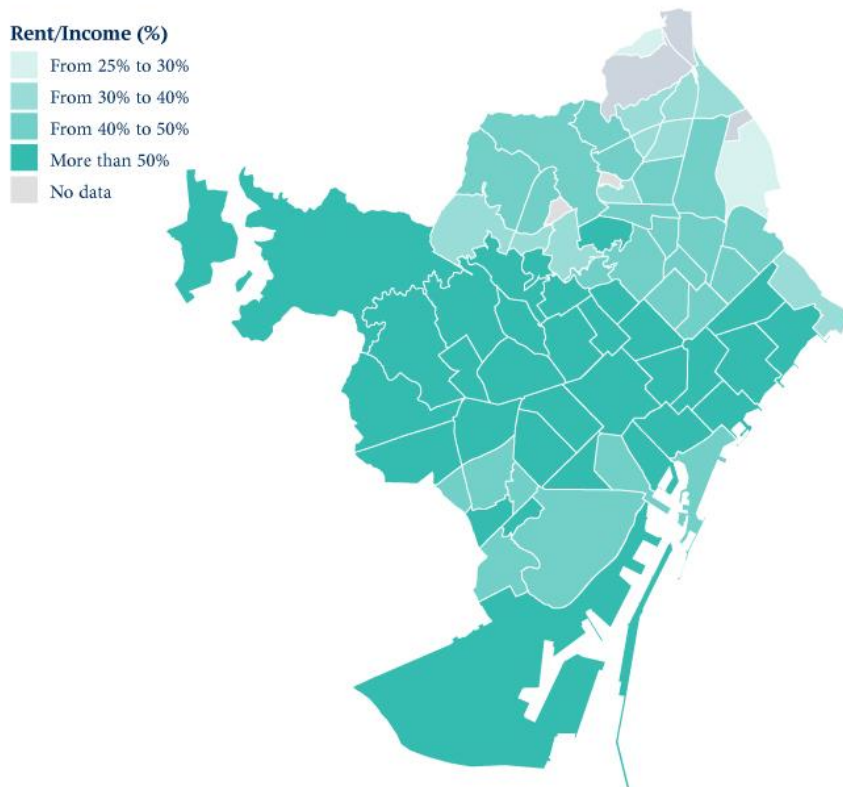
The separation between the growth of household incomes and median housing prices, whether for the purchase of new or second-hand properties or for rent, does not align with the growth of household incomes but always occurs in much larger proportions. In fact, considering the evolution since the year 2000, while household incomes have increased by 64.9%, the average sale price of new construction has increased by 190.1% (2.9 times more), that of second-hand properties by 164.5% (2.5 times), and the rental price by 151.5% (2.3 times).

If the dynamics described are observed considering housing solely as an investment, the data confirm what is well-known in the sector, namely that housing, with greater or lesser intensity, offers positive returns in the long term. However, if the focus shifts to considering housing also as a basic necessity, the data presented reflect a problem, probably one of the main problems of our residential system: the separation between the average incomes of the population and the average housing prices continues to advance, and these move away from the real possibilities of households.

The trend of separation between household incomes and average housing prices, both for purchase and rent, has a direct translation into the difficulties of access to housing for the population. During the real estate boom of 1996-2007, where the main form of access to housing was ownership, this separation between incomes and prices had been partially offset by low and/or seemingly favorable financing conditions (low reference interest rates, loan-to-value ratio, and average mortgage duration). However, after the boom, access to ownership ceased to be an option for many families, and the demand for rental housing increased significantly (Observatori Metropolità de l'Habitatge de Barcelona, 2019). Therefore, to access rental housing, financing conditions do not intervene, so the separation between incomes and average housing prices, as just seen, directly affects households' access efforts.

Thus, if we examine in detail the conditions for accessing a rental property of average price for a household with annual net income of €25,000, we can see how limited their options are in the neighborhoods of the city of Barcelona (Figure 1). In fact, with the prices from the second quarter of 2023, a household with these characteristics could only afford a rental property in the neighborhoods of Ciutat Meridiana and El Bon Pastor, and even in these cases, they would have to allocate almost 30% of their income (28.5% and 28.9%), which is considered the maximum recommended threshold. In the rest of the neighborhoods, the effort for rent payments exceeds this 30%."

Figure 1. Theoretical Effort to Access Rental Housing for a Household with €25,000 Annual Income. Barcelona Neighbourhoods. Second Quarter of 2023



Source: Author's own elaboration. Secretaria d'Habitatge, from the deposit register deposited at INCASÒL.

It is important to note that half (50.4%) of households led by individuals aged 16 to 39 in the metropolitan area do not reach this income threshold (Metropolitan Housing Observatory of Barcelona, 2023). Therefore, without other forms of assistance, whether from the government or family, these are the possibilities they face in the rental market. On the other hand, it should be highlighted that the calculations were based on the average rental price, while there are offers below this average that would make the average access conditions described less expensive. However, in almost all neighborhoods (65 out of 69 with available data), the effort in relation to the average price is not just above 30%, but above 35%, and even in 56 of the 69 neighborhoods, it exceeds 40%.

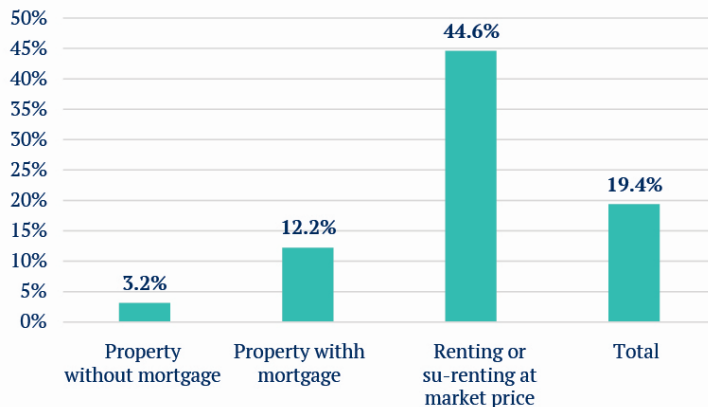
In conclusion, the trend of separation between the population's incomes and the average housing price, common in other cities in our environment, has a clear manifestation in access conditions. In the specific case of the city of Barcelona, it leaves half of young households excluded from the market in a significant part of the city's neighborhoods. Thus, the housing access problem, far from being limited to the most vulnerable population, is increasingly widespread, particularly among younger generations trying to access housing, and in many cases, can only do so in the rental market.

5. Cost and challenges of remaining in the house

The growing gap between household incomes and the average housing price not only has consequences for housing access but also affects the population that has already gained access but must face monthly expenses. These expenses can represent a significant percentage of household incomes and even exceed recommended thresholds, turning housing into an insecurity factor for households, especially those in rental situations, as will be discussed below. An indicator to approximate this reality is the cost-burden rate, which accounts for the percentage of the population living in households that allocate more than 40% of their incomes to housing expenses, including rents, mortgage payments, and utilities.

In the 2021-2022 period, the cost-burden rate for housing expenses in the population of Barcelona is 19.4% (Graph 4). However, this rate differs by tenure type. For the population living in homes that are completely paid off, the rate is very low at 3.2%. In contrast, for the population living in homes with a mortgage, the rate increases to 12.2%. However, among the population living in rental households, the cost-burden rate multiplies and reaches 44.6%. In other words, 44.6% of Barcelona's tenant population living in households allocate more than 40% of their incomes to rent and utility expenses⁵.

Graph 4. Cost-burden rate for housing costs by tenure type. Barcelona. 2021-2022.



This pronounced burden among households living in market-rate rentals can be attributed to several reasons. Firstly, it is essential to consider that, on average, households in rental properties have lower incomes than those in ownership (Observatori Metropolità de l'Habitatge de Barcelona, 2018). Secondly, it's important to note that a significant portion of the population in rental housing must face rents stipulated in relatively recent contracts, many of which incorporate significant price increases from the last three years. In contrast, a significant portion of the population in owned homes secured their mortgages a long time ago, even before the last real estate boom (1996-2007). Specifically for the population paying a mortgage, it's crucial to consider that the cost-burden data refers to the 2021-2022 period when the 12-month Euribor, the benchmark interest rate for most mortgages, was in negative values. Most likely, with the notable increase that occurred during 2023, the cost-burden rate for the population in owned homes with mortgages will have increased significantly.

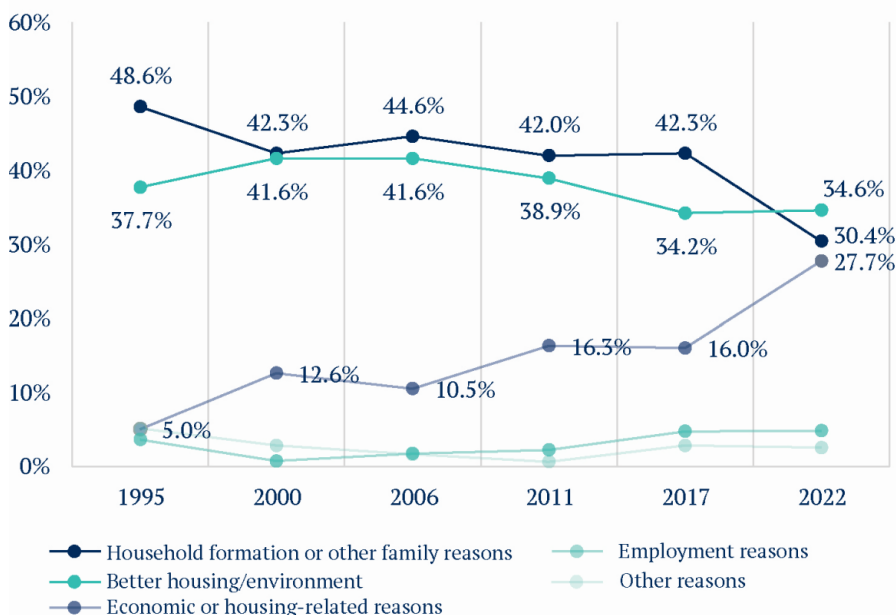
Regardless, it is in households living in market-rate rentals where the cost-burden rate has a more noticeable impact, especially considering that the alternative, which would be social housing, is very scarce in the city of Barcelona, and in Spain in general, representing only 1.9% of the housing stock (Donat et al., 2021). All of this greatly conditions the trajectory and life plans of the population, not only at the time of accessing housing but also after gaining access.

Indeed, the increase in housing instability is one of the main consequences of the accessibility crisis, especially during the last decade, in which renting has gained prominence as the tenure type for households (Módenes, 2019) (Graph 5). Thus, until 2006, the two main reasons for the population of Barcelona to change housing were the formation of a household or other family reasons on the one

5. This is a threshold established within the framework of the EU-SILC (The European Union Statistics on Income and Living Conditions), collected by Eurostat, to compare the situation between countries. In Spain, the source collected for this information is the Living Conditions Survey (LCS), which also allows results to be obtained by autonomous communities. Fortunately, in the case of the Barcelona metropolitan area, an extension of the sample is available to go down to the territorial level of the city of Barcelona and the rest of the metropolitan area, in a manner consistent with the official statistics just seen. However, in relation to the method followed by the EU-SILC to calculate the overload rate, a change has been introduced. Indeed, in the case of the population living in households that are paying a mortgage, the EU-SILC surcharge rate does not count as an expense the amortization part of the loan (that is, it only counts interest), since it is considered an investment. However, if you want to put emphasis on the payment difficulties that the population has, as is the case in this article, it is more approximate to consider all the expenses included in the mortgage payment. Taking this last approximation as a reference, the overload rate has been redefined, accounting for both interest and amortization of the borrowed capital.

hand, and to improve housing or the environment on the other. In fact, these two motivations practically explained the entirety of residential mobility in the Barcelona metropolitan area.

Graph 5. Main reason for the change of residence for the population of Barcelona. 1995-2022.



Source: Idescat and Institut Metròpoli, Encuesta de Condiciones de Vida y Hábitos de la Población, 1995-2011; and Institut Metròpoli, Enquesta de cohesió urbana, 2017 i 2022.

For instance, in 1995, these two motivations represented 48.6% and 37.7%, and together they were the main reason for 86.3% of all housing changes. On the other hand, the rest of the motivations had a very minority weight. Continuing with the year 1995, economic reasons or those forced by housing were only the main reason for change in 5% of residential changes, while labour-related reasons were the cause in only 3.6% of cases. This distribution from 1995 has remained approximately the same during the years 2000 and 2006, with the only change being that the two main motivations have been equalized, but together they have always been the main reason for most of the metropolitan population (83.9% in 2000 and 86.2% in 2006).

From the year 2000, although the two main motivations for changing housing continue to lead the classification, a third has emerged that has gained significant weight: economic reasons or those forced by housing. Indeed, this motivation has gone from representing 5% of reasons in 2000 to 16.3% in 2011, rising to 27.7% in 2022.

This significant increase in housing changes for economic or forced reasons has also become widespread throughout the Barcelona metropolitan area (Porcel et al., 2023). In this sense, it cannot be separated from the accessibility crisis being exposed, but very particularly, from what has happened over the last fifteen years or so, when renting has become the majority form of housing access and gains weight as the tenure type for households. In other words, the burden of paying for housing that many rental households experience not only has an economic impact but also translates into greater unwanted residential instability.

In conclusion, among the population that has already accessed housing, the costs they must bear to pay for it can be very significant, especially among the population living in rentals. Specifically, almost forty-five out of every hundred residents in Barcelona living in rental housing must allocate more than 40% of their earnings to pay for housing, significantly shaping their trajectory and life plans. Also, mainly among lower-income households, the burden of housing costs translates into an element of instability, with the personal and social consequences that ensue.

6. Conclusions

The state of housing, at least over the last two decades, cannot be understood without considering what has been termed the global housing accessibility crisis, which is replicated in other cities worldwide. However, the specificities of each city, each residential system, add, according to the author, as many or more elements of specific analysis, which this work has focused on.

To begin this exploration, it started with quantifying housing needs, i.e., the number of households. It was observed that during the last intercensal period (2011-2021), households in the city of Barcelona stagnated (from 684,078 to 671,177), breaking a trend that had been notably growing in recent decades. Additionally, this stagnation of households occurred simultaneously with a moderate increase in the population, a new situation over the last forty years. The reader can deduce that one consequence is that the average size of households has increased, from 2.34 persons in 2011 to 2.37 in 2021.

Before drawing hasty conclusions, however, it should be noted that this dynamic of household regression was particularly intense during the first part of the intercensal period, coinciding with the economic recession after the international financial crisis. In contrast, in the second half of the decade, an increase in the number of households has been observed, despite the Covid-19 crisis. This might indicate that, rather than a change in trend, it has been a parenthesis. Nevertheless, the evolution should be monitored to validate any of these hypotheses in the future.

With the scenario of stagnant household numbers and increased average occupancy referenced, the main factors explaining this evolution were analysed. Firstly, the impact of positive migration balances due to international migrations was highlighted, which had sharply declined during the first half of the intercensal period, recovering during the second half (with the parenthesis of 2020 due to the Covid-19 crisis). In contrast, migrations to the rest of the demarcation, mainly motivated by housing-related issues, showed negative balances in the city of Barcelona during the period 2011-2021, although these losses moderated compared to previous periods.

Alongside migrations, the influence of age structure on the formation of new households was analysed. It was observed that the population cohorts expected to become independent during the period 2011-2021 had decreased compared to the preceding intercensal period. This reduction in numbers, combined with a decline in emancipation rates, resulted in a slowdown in the formation of new households in these life stages. On the other hand, there has been a high concentration of the population above 75 years in older age groups, leading to a greater impact of mortality, which often involves the dissolution of households.

Finally, to explain the evolution of households in the period 2011-2021, emphasis was placed on household typology. Specifically, it was shown that single-parent households and those without a nuclear family have experienced the most significant growth, while single-person households, although increasing, have done so at a much more moderate pace than in previous decades. In contrast, households that have decreased the most are childless couples, breaking the previous upward trend of intercensal periods; couples with children, intensifying their decline; and, finally, multiple-person households.

After examining the evolution of the number of households and analysing its causes, the study focused on the housing stock, which has remained practically stable during the last intercensal period (808,752 family homes in 2021, 0.3% less than in 2011). This dynamic breaks the trend of the previous decades, but before delving into possible causes, it should be noted that the last census introduced methodological changes when counting the stock. Nevertheless, available data indicate that it was not due to a halt in construction since 12,770 homes were completed during the period 2011-2021.

On the other hand, the stock allocated to the main residence has decreased slightly (671,178 units, 1.9% less than in 2011). In this case, the main causes of the decline probably lie in the change of

the main residence to tourist uses. Continuing with the main stock, the tenure regime was analysed in-depth to show that in 2021, 409,686 households (61%) lived in owner-occupied homes, which still remains the majority regime. However, there has been a decrease of 27,945 compared to 2011. Regarding renting, census data show that, despite the dynamism of the market, especially over the last decade, the stock of main residence housing allocated for rent has grown very little, reaching 208,467 units (31.1%) in 2021, only 2,555 units more than in 2011.

Once the quantitative housing needs and stock evolution were analysed, attention turned to issues related to accessibility, which, as known, has become the main housing problem in recent decades. The origin of this problem lies in the structural trend of separation between household incomes and average housing prices. In the city of Barcelona, between 2000 and 2022, while household incomes increased by 64.9%, the average price of new construction increased by 190.1% (2.9 times more), second-hand by 164.5% (2.5 times), and rental by 151.5% (2.3 times).

It should be noted that this trend is structural beyond the phases of the economic cycle. Thus, in periods of economic recession and price contraction, this decrease, adjusted for inflation, does not counteract the growth that has occurred in periods of price increases. The result, as can be deduced, is that in the long term, prices increase, and they do so much faster than the growth of household incomes.

Logically, this divergence of prices from the real possibilities of households has an impact on the difficulties of access to housing, which in recent decades has predominantly occurred through renting. Thus, a typical household with an annual income of €25,000, a threshold not exceeded by half of the households headed by young people aged 16 to 39 in the metropolitan area, could only access a rental property in two neighbourhoods in the city of Barcelona. In the rest of the neighbourhoods, they would be excluded from the market, as in 10, they would have to allocate between 30 and 40% of their income, in 25 between 40% and 50%, and in 31 more than 50%.

But the separation between incomes and prices not only translates into possibilities of access but also into the costs that household economies must bear in paying for housing, which, along with supplies, significantly conditions the material conditions of a significant part of the population of Barcelona, particularly the population that lives in rentals. To approximate this reality, an indicator called the rate of housing cost overload has been used. Well, in the city of Barcelona, 44.6% of the rental population lives in households that allocate more than 40% of their income to the payment of rental and supply costs.

Naturally, this overload conditions the trajectory and life plans of the population, aggravating residential insecurity. In fact, economic or housing-forced reasons have become the reason for changing housing from 5% of the population in Barcelona in 2000 to 16.3% in 2011, rising to 27.7% in 2021. The indicators that have been seen indicate the difficulties of access and permanence in housing in the city of Barcelona for an increasingly large population group, especially for the population that lives in rentals. It is worth noting that these are verified indicators from official sources, allowing the construction of long-term statistical series, essential for diagnosing and quantifying the main dynamics of society and guiding decision-making.

Bibliography

Costas, A. (dir). (2007). *El Llibre blanc de l'habitatge a Barcelona*. Ajuntament de Barcelona, Institut Municipal d'Urbanisme.

Donat, C. (2016). Situació de l'habitatge a Barcelona. Emmarcament metropolità. En *Pla pel Dret a l'Habitatge de Barcelona 2016-2025. Part I. Anàlisi i Diagnosi* (pp. 25–37). Ajuntament de Barcelona. Regidoria d'Habitatge. Àrea de Drets Socials.

Donat, C., Sender, M., Bosch, J., & Arcarons, A. (2021). *State of housing 2021. Catalunya i Barcelona*. Observatori DESC i Observatori Metropolità de l'Habitatge de Barcelona.

Duatis, J., Buhigas, M., & Cruz, H. (2016). *Impacte del lloguer vacacional en el mercat de lloguer residencial de Barcelona*. Ajuntament de Barcelona.

European Commission. (2022). *Housing market developments in the euro area: focus on housing affordability. Technical note for the Eurogroup*.

Galster, G., & Lee, K. (2021). Introduction to the special issue of the Global crisis in housing affordability. *International Journal of Urban Sciences*, 25(sup1), 1–6. <https://doi.org/10.1080/12265934.2020.1847433>

Housing Europe Observatory. (2022). *The State of Housing in Europe. 2022 mid-term update*.

Institut Municipal de l'Habitatge i Rehabilitació de Barcelona. (2019). *Cens d'habitatges buits de Barcelona. Informe dels resultats totals a la ciutat*.

Módenes, J. A. (2019). L'insostenible augment de la inseguretat residencial a Espanya. *Perspectives Demogràfiques*, 13, 1–4.

Observatori Metropolità de l'Habitatge de Barcelona. (2018). *L'habitatge a la metròpoli de Barcelona. 2017*. O-HB.

Observatori Metropolità de l'Habitatge de Barcelona. (2019). *L'habitatge a la metròpoli de Barcelona 2018*. O-HB.

Observatori Metropolità de l'Habitatge de Barcelona. (2023). *L'habitatge a la metròpoli de Barcelona en el 2022*. Observatori Metropolità de l'Habitatge de Barcelona.

OCDE. (2021). Building for a better tomorrow: Policies to make housing more affordable. In *Employment, Labour and Social Affairs Policy Briefs*. OECD.

Porcel, S., Antón-Alonso, F., Gómez, N., & Morcillo, R. (2023). *Enquesta de cohesió urbana (ECURB), 2022. Resultats sintètics*.

Sender, M., Donat, C., Bosch, J., López, J., Gigling, M., Hernández, R., Arcarons, A., Rodríguez, I., & Trilla, C. (2021). *L'impacte de la Covid-19 en el sistema residencial de la metròpoli de Barcelona. 2020*. Observatori Metropolità de l'Habitatge de Barcelona.

Serme-Morin, C., Coupechoux, S., Aldanas, M.-J., Domergue, M., Spineewijn, F., Stakelum, R., Derdek, N., Portefaix, P., & Jones, S. (2022). *Sixth overview of housing exclusion in Europe. 2021*.

Trilla, C., & Bosch, J. (2018). *El parque público y protegido de viviendas en España: un análisis desde el contexto europeo*. Fundación alternativas.

Wetzstein, S. (2017). The global urban housing affordability crisis. *Urban Studies*, 54(14), 3159–3177. <https://doi.org/10.1177/0042098017711649>