

HOUSING PRICE INFLATION AND INEQUALITY

Assessment of the housing market in the city of Barcelona

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A. EXECUTIVE SUMMARY

The aim of this Bachelor's Degree Final Project is to cover the house price appreciation to rise the awareness of the "laissez-faire" in the housing market on the social welfare: how it can be an origin of economic, spatial and social inequality; and, in last instance, the vulnerability of the right to shelter, because of affordability problems of low-income households.

In the last decades, there has been a commodification of the housing market. Liberalization of the credit market, globalization and cuts on public housing spending of governments, has shaped the perfect scenario for a long upward trend of house prices and in which capital accumulation has created a clear dichotomy based on asset ownership. The severity of the issue has called the public authorities to take measures to tackle the Global Urban Housing Affordability Crisis.

The research used has based on a long list of academic papers. However, Piketty's work in the 'Capital in the 21st Century' and the paper of *Adkins et al. (2019)* from The University of Sydney, in which it is discussed the growing inequality and it is outlined a new asset-based class taxonomy, have defined the grounds, the development and the scope of this research.

In regards to the structure of the contents, two parts can be differentiated. On the one hand, a theoretical part regarding the evolution of house prices and the inequalities resulted from higher growth rates of house prices than income growth rates. On the other hand, an assessment of the housing market of the city of Barcelona is conducted in order to have a close picture of the impact of the house price appreciation on the city and its inhabitants. The reasons why the city of Barcelona has been chosen as a case of study are: European major cities have experienced stronger house price appreciation, the City Council of Barcelona has a large and accurate database of the housing market of the city and, personally, we have experienced its impact in the first person.

B. THEORETICAL FRAMEWORK

1. House price inflation. Looking for an explanation.

The analysis of the current Global Urban Housing Affordability Crisis cannot be addressed without first going back to the past to identify which have been the fundamental drivers of this housing price growth: the changes in the government intervention in the Real Estate market, the globalization and the liberalization of the credit market.

The Second World War left many people across Europe homeless (Vroelant and Tutin, 2010). In the reconstruction of the cities, the states took an active role on the matter by building social housing and, as a result, housing became an issue of public policy within the scope of the Welfare state. While some countries intervened through social housing, others advocated for encouraging home ownership.

However, the downturn of the economy in the 70s brought a shift towards neo-liberal policies in an attempt to cut off public spending by decreasing the funding for public housing and subsidies. The structural adjustments and fiscal austerity programs continued after the debt crises in the 80s and it was extended globally. This was accompanied by the deregulation of financial markets.

The deregulation of the financial market gave birth to a “financialised” form of home-ownership by allowing households to rely on mortgage debt to access the housing market. This easy access to credit for housing also contributed to the constant appreciation and the later boom of the global housing prices. On top of that, it also supposed the redefinition of housing as a liquid asset: housing was not anymore a matter of shelter and started to be seen as an investment: households became investors by using housing as an investment or form of self-provisioning in case of uncertainty or, for instance, for retirement (Allon, Barrett, 2018).

Thus, the combination of the liberalization of the credit market, the promotion of the governments for homeownership among low-income households (relying on mortgages) as well as the liberalization of rental contracts (e.g. Ley de Arrendamientos Urbanos in 1985 and 1994) (Rolnik, 2013) as measures to lower public spending, the demand in the housing market increased, leading to house price inflation (OECD, 2011).

During the following years, the rapid growth of house price inflation did not slow down the demand which in turn increased the costs of homeownership, so did the mortgage debt. As a result, households would buy their homes with debt and, as long as banks kept lending, demand could keep rising at the same pace as house prices (clearly, the most accurate example of the ‘financialisation’ of the housing market). Consequently, at that time the mortgage lending quadrupled and it translated into a massive increase in house prices (Adelino et al., 2012).

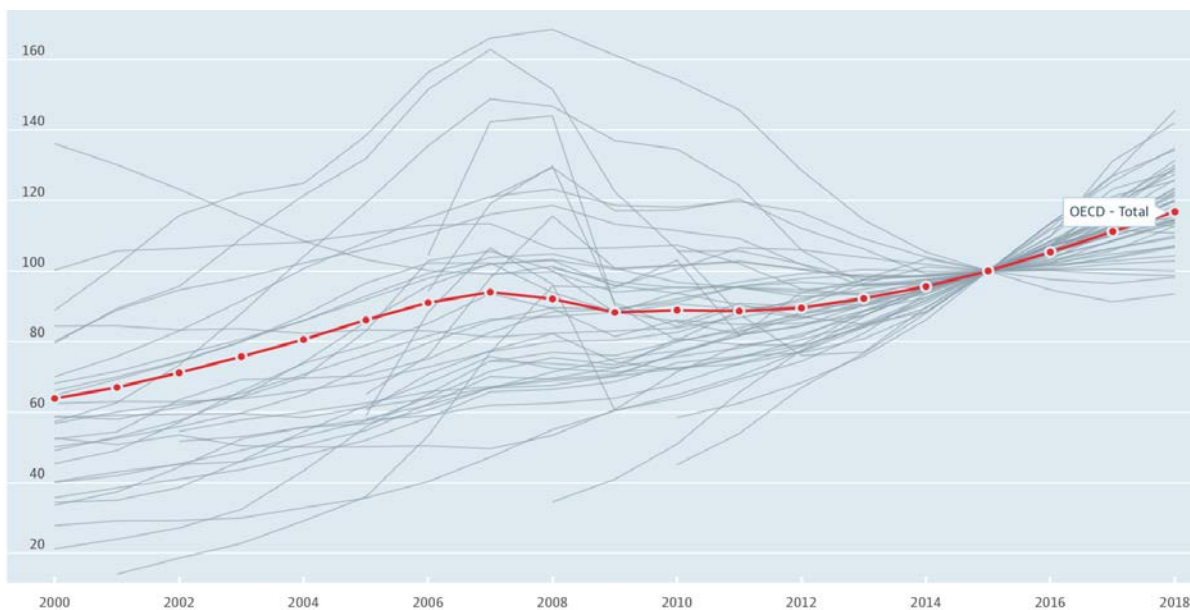


FIGURE 1. Housing prices. Nominal house prices, 2015=100, 2000 – 2017. Source: OECD data.

Looking at the evolution of housing prices¹ (Figure 1), prices only started to went down when the Financial Crisis of 2008 began (OECD, 2019). However, after a short period of stabilization, they have started to rise again until now.

As Adkins et al. (2019) defend in their paper, the increase of real estate prices was indeed in part speculative because of the spread of the common belief that there will be always a counterpart for a property in the market. Furthermore, the consistency in the appreciation of the housing market, even after the crisis, cannot be only driven by speculation because it is a quite transparent market with little innovation. Besides, pointing out price inflation as a possible explanatory argument it is not valid either since it has been low and stable during the last decades.

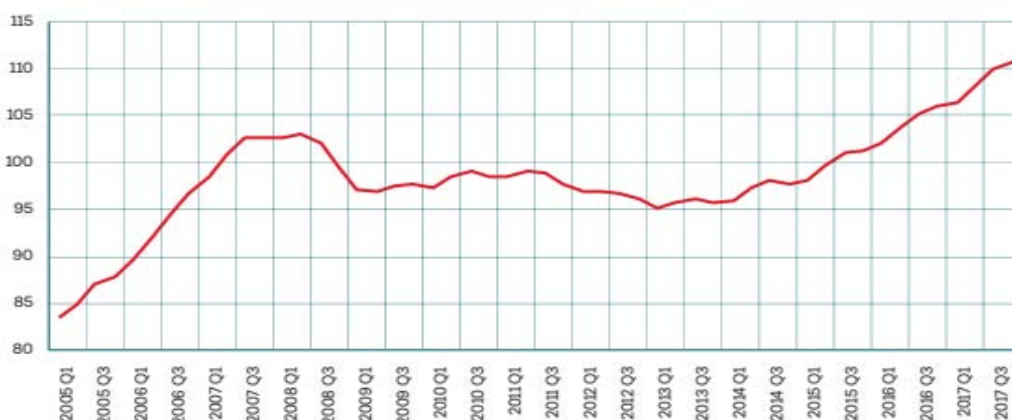


FIGURE 2. EU Housing Prices, 2005-2017. Source: Eurostat. Note: Index 2015=100.

¹ The housing prices indicator shows indices of residential property prices over time. In most cases, the nominal house price covers the sale of newly-built and existing dwellings, following the recommendations from RPPI (Residential Property Prices Indices) manual.

Nonetheless, when the economic crisis hit all the European countries in 2008, it created an exogenous demand shock for the social housing market (poverty rates increased and mortgages were no longer available). It was not until the beginning of 2016 when Europe recovered and continued in its regular upward trend, as it can be seen above (Figure 2).

What is more, it is noteworthy that, even though in Europe house prices have increased, there are differences across countries and, especially, in major cities (Figure 3) (Inchauste, 2018). For instance, northern European countries, such as Sweden and Austria, experienced average higher growth rates close to 50%. On top of that, capital cities and dense urban areas are characterised for having a higher average growth with respect to the country average; as it is the case with London, Dublin, Paris or Copenhagen. One of the multiple factors that could explain this difference is the substantial increase of corporate and foreign investors in major cities as of 2013 (Vandecasteele et al., 2019).



FIGURE 3. Housing Price Growth in EU Agglomeration Centers Relative to Country Averages, 2010-2016. Source: EMF 2017.

Since the Financial Crisis of 2008, the European housing policy has resulted unable to satisfy the demand for affordable housing while housing prices have continued to rise (Wetzstein, 2017), either because of reasons out of control of the government, such as unavailability of land; the limited government investment (Shelter, 2014); or because of the emergence and expansion of online rental platforms (paradigmatic case of Airbnb) (Vandecasteele et al., 2019). In short, there is a stock shortage of houses which pushes prices up.

Additionally, it is important to note that, in the increase of house prices, it still remains unclear whether there is or not a causal relationship between house prices and borrowing (Campbell & Cocco, 2007; Attanasio et al., 2009 and 2011) and, if the answer is affirmative, in which direction the causality

goes. However, there is no doubt that higher housing prices push households to take on bigger loans and increase the value of the collaterals. In other words, a higher household debt ratio would significantly increase growth rate of real estate price (Kohler Van der Merwe, 2015)². Besides, as supply is inelastic in many housing markets, at least in the short run, this pushes prices up.

All in all, it seems that real estate inflation is not the only result of the financialisation of the housing market, but also public policies have contributed and shaped the market by creating a silent race for ownership of all the individuals, either for housing as an investment or as a set goal in life.

2. Rising in housing prices and inequality. Consequences.

The house price appreciation is increasing inequality at different levels: economic inequality, since capital accumulation and the constant growth of house prices create wealth for only some individuals, while others only bear the increasing in housing spending (distributional consequences and Global Affordability Crisis); social inequality, reshaping social structures and classes: and, spatial inequality, transforming the landscape of the cities due to gentrification.

2.1. Global Urban Housing Affordability Crisis

Housing affordability is one of the key factors that can describe the socioeconomic stability and development of a country. Affordable housing is housing that is appropriate for the needs of a range of very low to moderate-income households and priced so that these households are also able to meet other basic living costs such as food, clothing, transport, medical care and education (Rowley & Ong, 2012).

According to Eurostat, a dwelling is considered to be affordable when a household spends 40 per cent or less of its income. Therefore, a household is ‘overburdened’ when the total housing costs represent more than 40 per cent of disposable income. In regards to housing costs, it includes mortgage or housing loans, interest payments for owners, rent payments for tenants, utilities (water, electricity, gas and heating) and any cost related to the regular maintenance and structural insurance (Demographia, 2018).

The upward trend of housing prices and costs affect directly the budget and wellbeing of the households, who have to bear with the increase in housing expenses by diminishing their disposable income. At present, accessing the housing market represents one of the most difficult steps for young generations with respect to the baby-boomers, due to the fact that they have to keep up with the increasing of house prices and costs while their wages do not increase at the same rate. According to the Office of National Statistics (2017), house prices now stand at an average growth rate of 7.6 times the average annual salary, more than double the figure for 20 years ago. As a result, there is a clear divergence between the two, a gap that has widened over the last two decades. Consequently, inequality

² The Reserve Bank of Australia (RBA) has shown that the period from the 1990s until the mid-2000s saw strong housing price growth associated with a significant increase in the debt-to-income ratio of Australian households (Kohler and van der Merwe 2015, 23).

grows between low-income households, who cannot access the housing market, and high-income households who take advantage of the market recapitalization.

On one hand, affordability essentially concerns housing costs relative to income (OECD, 2017), i.e. house price-to-income ratio: the percentage of income that a household spends on housing costs (Eurostat, 2018)³. If house prices have increased faster than household disposable income (Eurostat, 2018), the house price-to-income ratio has increased as well. *Figure 4* shows clearly this upward trend of house price-to-income ratio in recent years. Hence, housing affordability is getting worse year by year. Compared to one year ago, fewer households can afford the limited number of homes on the market.

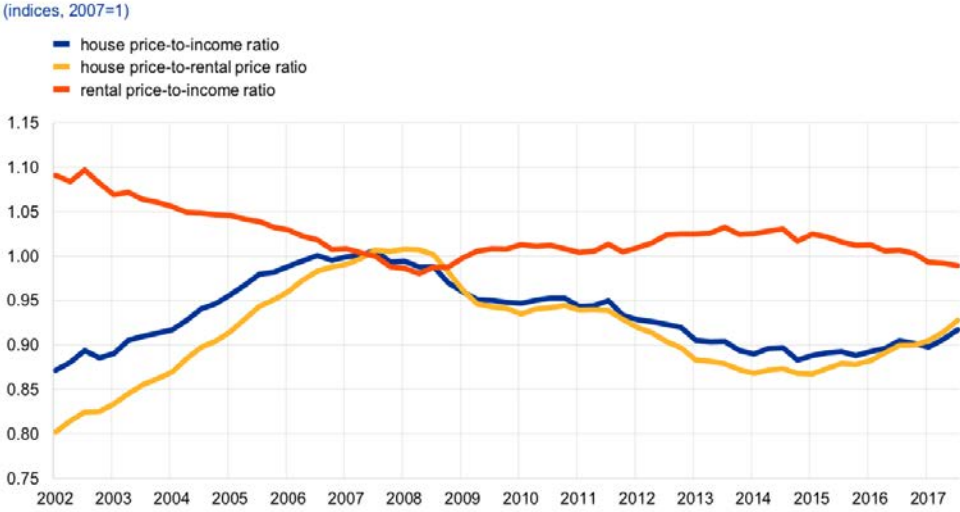


FIGURE 4. Euro area aggregate affordability indicators. Source: Eurostat and ECB calculations. Notes: Income refers to household gross disposable income. The latest observations are for the third quarter of 2017.

On the other hand, the ratio of interest payment to disposable income is also used to measure affordability, since people who access the housing market might probably have to ask for a loan. Taking under consideration that European Central Bank has kept interest rates close to 0, the ratio has decreased, which in turn has a positive effect on housing affordability. However, the increase in house prices is still higher than this reduction or stagnation of interest the payment (ECB, 2018).

Regarding the rental market, the rental expenditures-to-disposable income ratio can be useful to measure the impact of the increase of house prices on tenants which are also affected laggly. If rental prices are increasing at a higher average rate than house prices, tenants are facing a worse scenario than buyers, since new owners will transfer the house price increases through rents (Eurostat, 2018). However, this is not what really happens because rental prices have increased to a lesser extent than

³ Accordingly to the Global Property Guide, the house housing-price-to-income ratio is the cost of a typical upscale housing unit of 100 square meters, compared to the countries' GDP per capita (ECB, 2018).

house prices and disposable income in recent years, suggesting that house price increases do not generally fully pass through to rents, as we can see in the figure below (Figure 5).

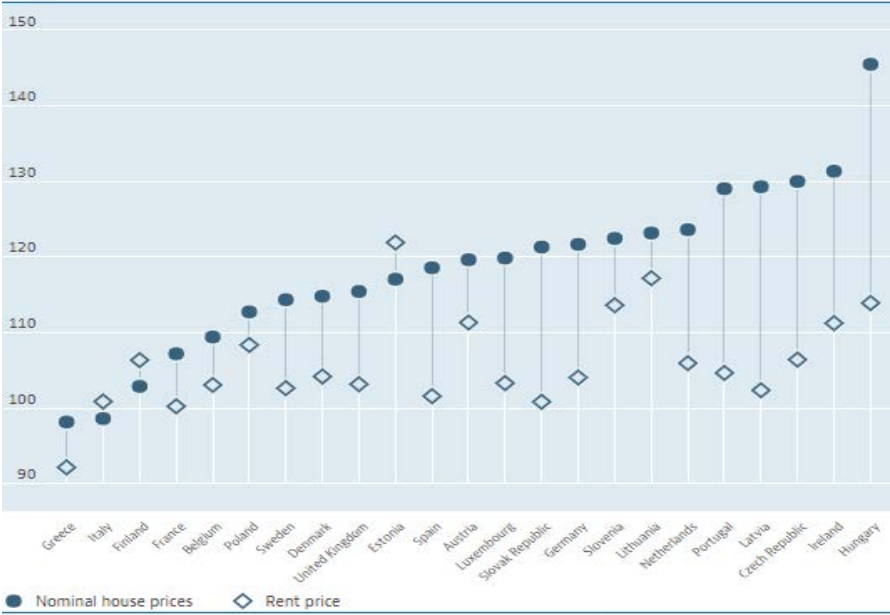


FIGURE 5. Housing prices. Nominal house prices / Rent price, 2015=100, 2018. Source: Prices: Analytical house price indicators

As Eurostat points out (2018), the current increase in house prices may impact the housing affordability of tenants if we take into account that, over time, owners who have bought their properties for letting out will want to recover the higher purchase price or the higher costs of maintenance that may arise in a tightening housing market.

Lastly, the housing cost overburden rate provides a measure of what percentage of the population spend more than 40% of their income on housing. The chart below (Figure 6) summarises what it has been said until now: owners that hold a housing loan are better off as house prices increase (percentage decreasing over time), while owners without a housing loan do not experience any change during the period studied.

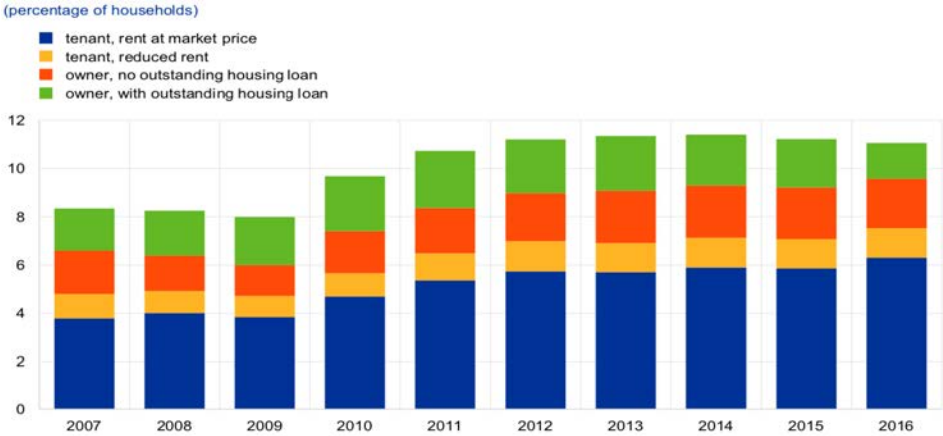


FIGURE 6 Housing cost overburden rate by tenure status. Source: Eurostat, EU Statistics on Income and Living Conditions (EU-SILC).

In contrast, tenants, who are

more overburdened in comparison, see their housing expense increase year by year having to bear those increments by pushing their static disposable income down. Besides, looking at the housing cost overburden rate by disposable income quintile (Figure 7), the income quintile at the bottom is two to three times more likely than the second quintile to be overburdened and the much more respect to the top three quintiles (Inchauste et. al, 2018). In short, poorer households and tenants who are more affected by the increase in housing costs.

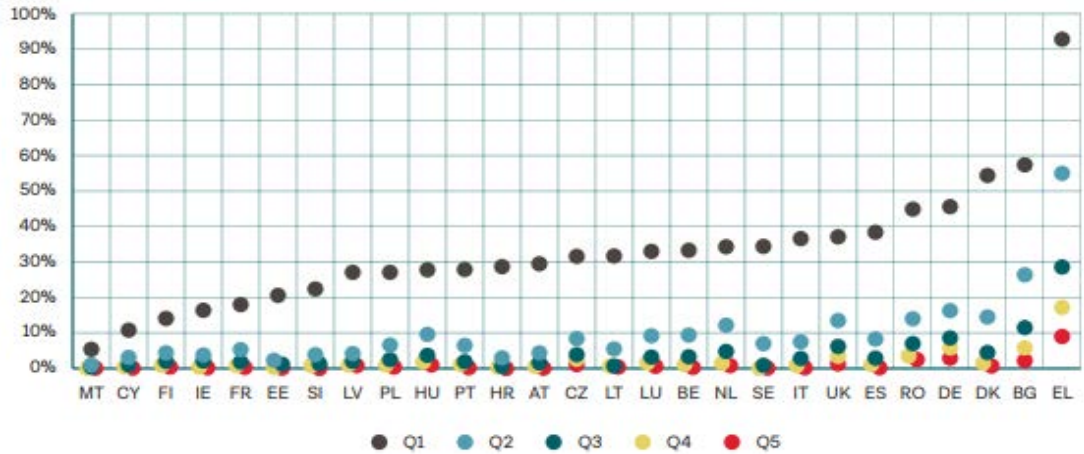


FIGURE 7. Housing Cost Overburden Rate in EU Countries, by disposable Income Quintile, 2016. Source: Eurostat based on the EU Statistics on Income and Living Conditions (EU-SILC). Note: Housing cost overburden is measured as the percentage of households spending more than 40 per cent of their total disposable income on housing costs. EU=European Union. Q1 is the poorest income quintile and Q5 the richest.

Again, and as it is shown below (Figure 8), in the agglomerated areas and major cities, households would have to bear higher housing costs (Inchauste, 2018). Besides, if 73% of the population lives in urban areas and this number is expected to rise to 80% by 2050, affordability becomes a more alarming issue to be faced.

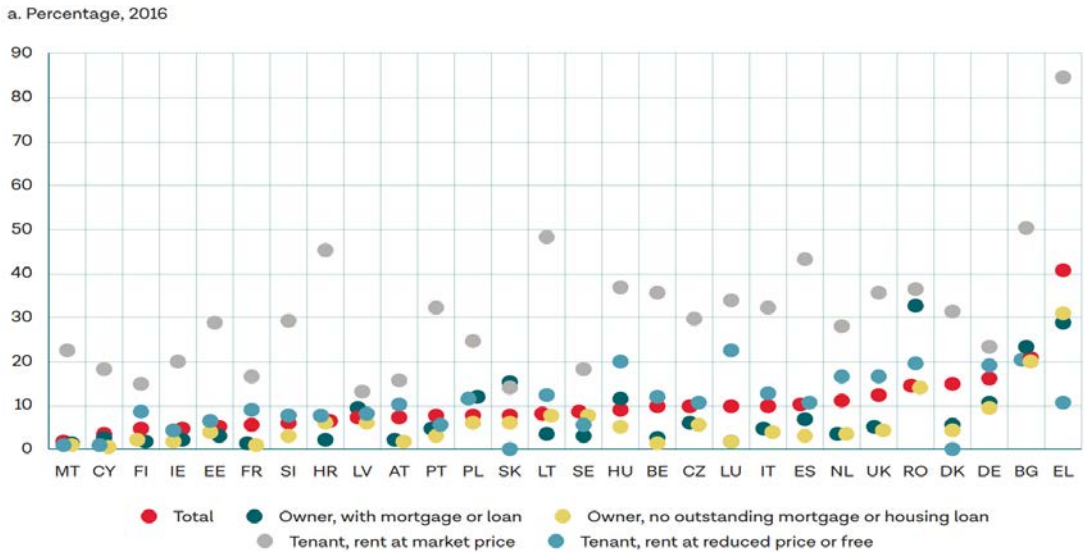


FIGURE 8. Extent of Housing Cost Overburden, by Degree of Urbanization, 2014. Source: EC and UN-Habitat 2016, based on Eurostat data.

2.2. Distributional consequences.

On one side, the upward trend of house prices (including rental market) has benefited some individuals in society at the expense of low-income individuals. On the one hand, speculators, investors, homeowners and landlords have gained from the market. However, it is true that homeowners are potential winners because they will not receive any return until they do not sell the property. Besides, there is also an intergenerational inequality between baby-boomers and following generations, which offset the gains of homeowner’s baby-boomers who economically support their children to access the housing market.

Unfortunately, on the other side, there are other individuals whose disposable income suffers from house price inflation. In general terms, they all belong to the low-income group: homeless, unemployed, minorities: but also property-less, first buyers or tenants. What is more, first time buyers could be seen as losers because, to overcome the gap between the growth of wages and house prices, they have taken a debt which does not allow them to take part of the winner group (Drudy & Punch, 2002).

All in all, there are winners and losers. As it is been anticipated above, this increasing inequality is partially caused by an intergenerational injustice, because post baby-boomers are unable to access the market without financial support, either from their parents and inheritance (intergenerational transfers) or by taking a debt (Wetzstein, 2012). As The World Bank Report of the European Union states (2018), housing cost overburden is more common among tenants, young adults and first-time-buyers, estimating an average probability of 30% of being overburdened compared with owners (Figure 9). On top of that, if major cities and agglomerated urban areas have been experiencing higher house price growth rates, these distributional effects are expected to be more acute in the aforementioned areas.

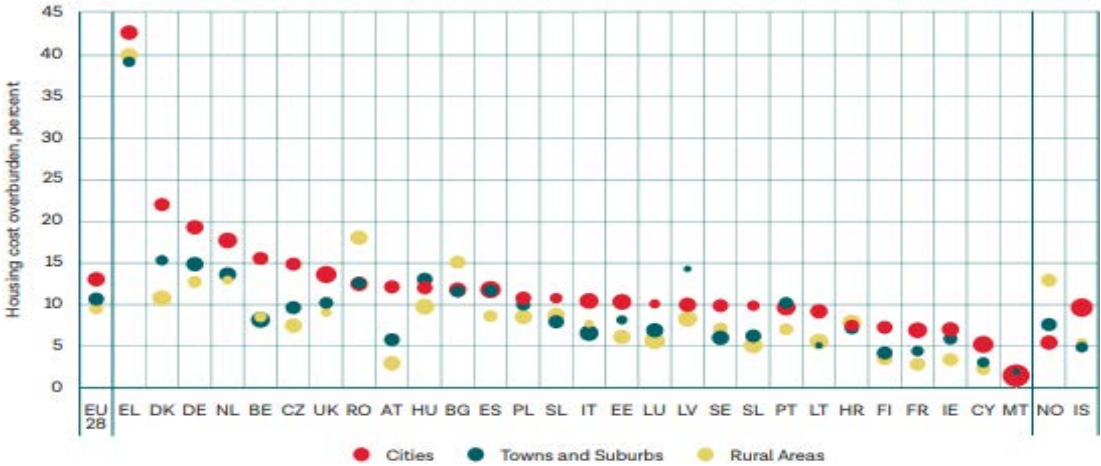


FIGURE 9. Housing Cost Overburden Rates in EU Countries, by Tenure Status. Source: Eurostat.

Lastly, it is convenient to introduce Piketty's work in the "Capital in the 21st century (2014)". Piketty points out that capital ownership is becoming more and more concentrated, widening wealth gap. He highlights that inequality of wealth started to increase during financial globalization and it seems that it will continue to do so. He supports that the reason for this wealth accumulation is due to savings and the higher rate of return of capital with respect to the growth rate (0.5-1 vs. 4-5%). In other words, as homeowners (investors, solicitors, etc) gained from the market by accumulating wealth they have recapitalized it at a higher rate than the growth of the economy. Besides, Piketty also adds that wealthier individuals could and can achieve a higher rate of return from capital than less wealthy people due to diversification and the capability of bearing more risk, which, in turn, would generate more inequality between groups.

2.3. Reurbanisation and gentrification

The concept of gentrification comes to define the process by which a normally working-class neighbourhood, which had been suffering a situation of abandonment and degradation, undergoes a process of revaluation that involves the expulsion of its traditional inhabitants and their substitution by upper-middle-class habitants. As a result, poorer households are being pushed out into peripheral urban locations and confronted with increased distance to metropolitan employment (Randolph & Tice, 2014), because they cannot keep up with the house increase appreciation.

While income segregation is neutral in essence, it can, however, become problematic if it affects those that are less advantaged, so that low-value areas or neighbourhoods might have low accessibility to jobs and quality services and amenities and, consequently, derive in a poor social environment. Such spatial concentration of disadvantages can be a life-long obstacle to opportunities available for those who live or grew up in such disadvantaged areas (Chetty & Hendren, 2015), increasing inequality in a broader spectrum.

Briefly, the increase of segregation in urban regions can also be associated with the residential choices of the top socioeconomic group, who earn the highest incomes (Harvey, 1985; Hulchansky, 2010; Maloutas, 2016). Since they have the most freedom to realize their housing and neighborhood preferences, they block the entrance to other income groups, in particular, the bottom socioeconomic groups with the lowest income (Vandecasteele, 2019).

The main motive for the origin of that process is income inequality. In effect, the relation between income inequality and economic residential segregation is undoubtedly causal (Kawachi, 2002). For instance, a study conducted by the OECD (OECD, 2018) shows that segregation tends to be higher in cities with higher average household income.

In this sense, house prices have also played a key role in the concentration of people in particular neighbourhoods according to their income level. Low-income households, facing increasing house

prices and costs, in the search for a home will only be able to afford the residual of the housing market, increasing socio-spatial segregation.

Residential segregation between socioeconomic groups in European urban regions has grown in the last decades (Fujita & Maloutas, 2016; Kazepov, 2005; Musterd & Ostendorf, 1998; Tammaru et al. 2016), becoming one of the most worrying problems to deal with by European policymakers.

However, a recent European comparative study headed by *Tammaru et al.*, (2019) shows that similar national levels of income inequality correspond with very different residential segregation levels between the top and bottom socioeconomic groups in European urban regions. After stated that the relationship between income inequality and socioeconomic segregation is not that automatically but complex, the authors have found that several mechanisms, such as changes in the population in urban neighbourhoods, the differential residential mobility of socioeconomic groups, and the nature and change of the urban housing stock, may intervene. Therefore, there is no one-to-one relationship between the two concepts. They finally came to the conclusion that there is roughly a decade between change in income inequality and change in residential segregation between the top and bottom socioeconomic groups.

All in all, not only does the house price appreciation reshape socio-economic groups, but it also transforms the socio-economic composition of the different geographic areas. Those who face housing affordability problems are being expelled to low-value properties, in worse conditions and, therefore, located in poorer areas with fewer facilities provided (Drudy & Punch, 2002).

2.4. Restructuration of social classes.

Marxism believes that social classes appear in societies with a social division of labor. “The Communist Manifesto” of Marx and Engels defines social classes as the bourgeoisie, who are the owners of the means of production and the proletariat; the workers; and, the oppressed. From that point of view, social classes are defined in relation to the ownership of the means of production, being the only point that divides them. However, this social division seems unsuitable or out to date, looking at the current panorama.

There have been some academics who came up with a new social class scheme. For instance, *Adkins et al.* (2019), professors from The University of Sydney, suggests a class scheme analogous to the Marxist scheme, which captures asset ownership as the vital driver of inequality, rather than the place in the division of labour and/or stocks of cultural capital. It seems reasonable because asset ownership has become the new cause of discrimination among population. Asset ownership determines the majority of aspects of life (location, job, social mobility, etc.) and deriving from the inequality in wealth generated by the uneven gains taken from capital accumulation (Aalbers & Christophers, 2014).

C. ASSESSMENT OF THE HOUSING MARKET AND ITS EFFECTS IN THE CITY BARCELONA (SPAIN)

1. Introduction. Barcelona in the Spanish and European housing market.

As it will be shown below, the Barcelona’s housing market is characterised and is currently following the same trend of either the Spanish or the European Housing market. However, the similarities between markets are not applicable in case of homeownership rates, since Spaniards have had a stronger sentiment towards this kind of tenure than the rest of European countries (Figure 10).

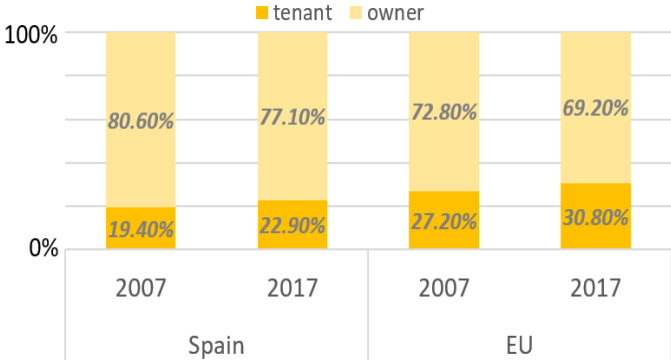


FIGURE 10. Change in distribution of the population by tenure status in Spain vs Europe, 2007-2017. Source: Compiled by authors based on the Database of Eurostat.

As it can be observed in Figure 10, in the last years it has been identified a shift towards renting. Besides, this shift is found in each of the age groups, although it is stronger for young generations, especially for the age group 16-29 years old (Figure 11). Thus, this supports the aforementioned intergenerational injustice, in which younger generations would be pushed towards renting so as they found hard to access de house market.

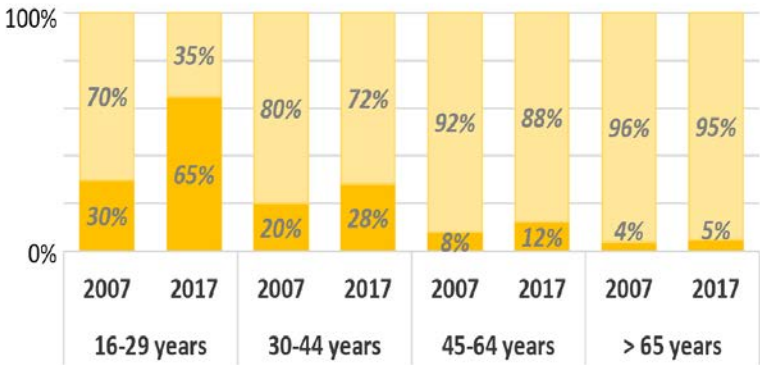


FIGURE 11 Variation in owners and renters in Spain by age group, 2007 vs 2017. Source: Compiled by authors based on the Database of INE.

Regarding Barcelona, it also shows the same pattern. Due to the limited residential options on sale in the urbe, it seems that the rental market has become the alternative. It is estimated that the proportion of the population living in tenancy has increased from 2.9% in 1990 to 38% in 2018.

In short, this shift towards renting will determine the evolution of the homeownership and rental market as well as public policy. For instance, indeed, living in ownership is a factor that limits residential mobility, while renting is associated with more frequent changes.

Without any other particular characteristic to depict from the Spanish and Barcelonian housing market with respect to what has been addressed previously, hereafter, a positive and normative analysis of the Barcelona’s house market is conducted.

2. Barcelona’s Housing Market. Measures taken by the City Council of Barcelona.

2.1. How Barcelona has experienced the house price appreciation.

The evolution of house prices in Barcelona has been the same as other major cities in other European countries and, therefore, the European house market overall (Figure 12).

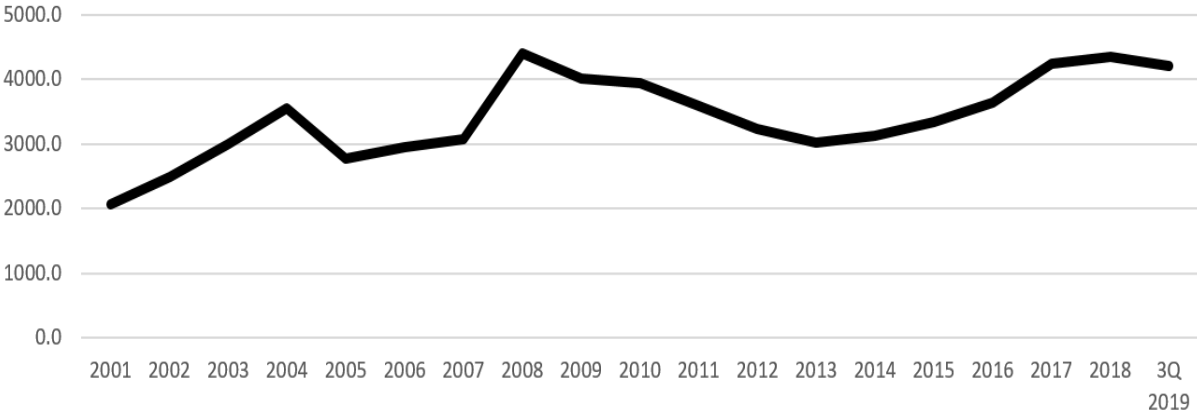


FIGURE 12 Evolution of average house prices of second-hand of real estate (residential houses) in Barcelona, 2001- 3Q 2019, euros/sq/m. Source: Compiled by authors based on the Database of Ajuntament de Barcelona. Departament d'Estadística i Difusió de Dades.

As a result of the shock in demand for accessing the housing market (Residential property) brought by the Financial Crisis in 2008, the demand for renting increases between 2008 and 2013, captured by a sharp increase of the number of rental agreements signed (Figure 13 b)). Nevertheless, during 2017 and 2018 the demand to access the housing market started to increase again, which it is thought to be the consequence of a housing shortage and, consequently, as it could not have been

otherwise, the rental house prices have kept increasing (Figure 13 a)). At present, the rental house price has accumulated an increase of 36.4% since 2013.

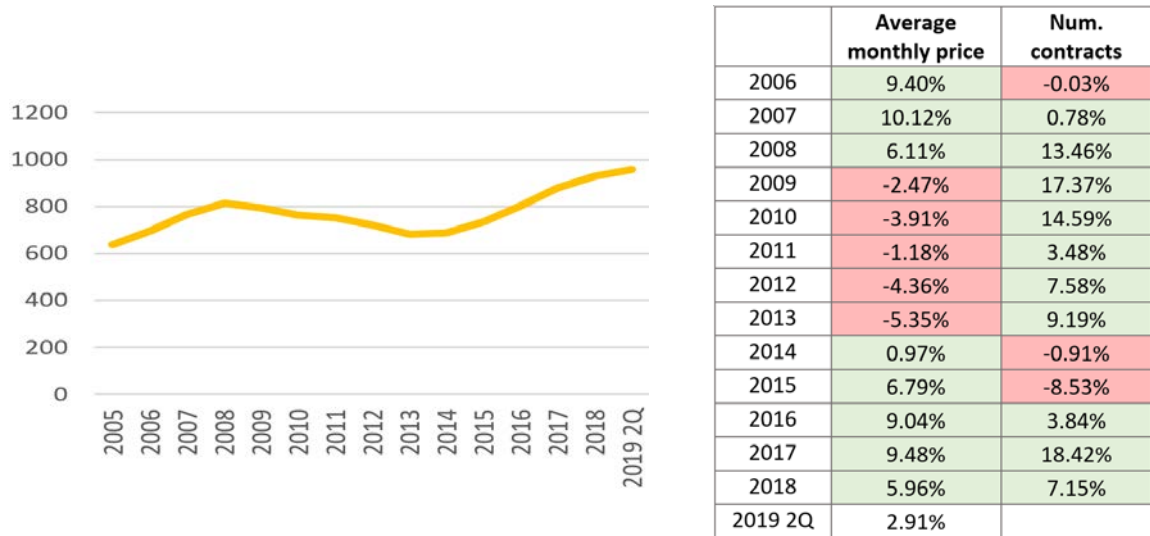


FIGURE 13. a) Evolution of average monthly rental house prices in Barcelona, 2005-2019 2Q. Source: Compiled by authors based on the Database of Ajuntament de Barcelona. Departament d'Estadística i Difusió de Dades. b) Variations of average monthly rental house prices and the number of contracts per year, 2005-2019. Source: Compiled by authors based on the Database of Ajuntament de Barcelona. Departament d'Estadística i Difusió de Dades.

In the following years, the rental prices will continue to increase at a constant rate, having a similar trend as other Spanish cities, except for Madrid (Figure 14).

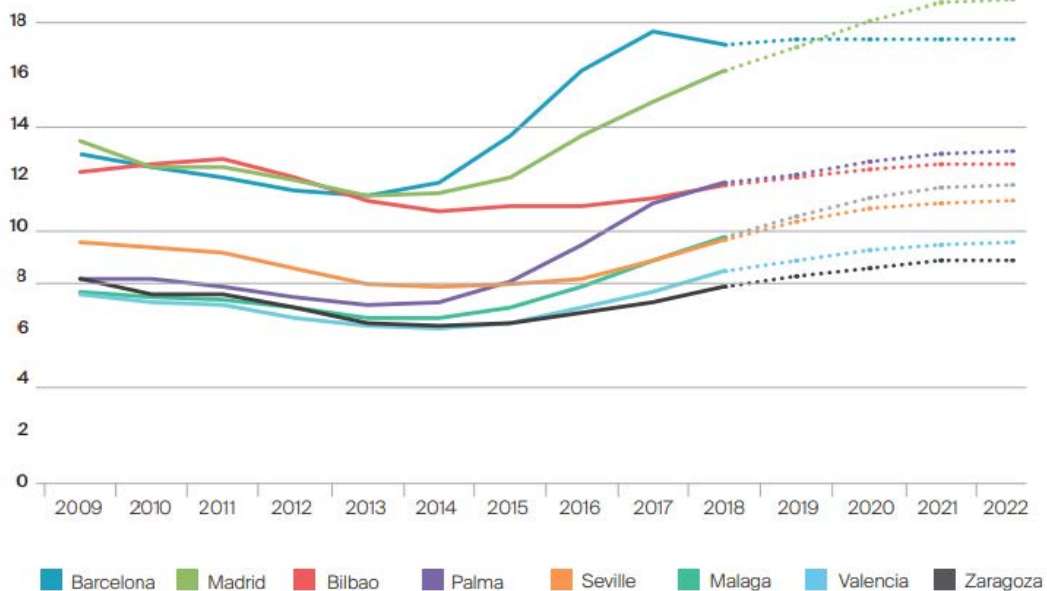


FIGURE 14. Average rental price growth and forecast in Barcelona and other main cities in Spain (€/sqm/month), 2009-2022. Source: Knight Frank Research.

2.1.1 Affordability becomes an issue after the Financial Crisis of 2008.

Since the Financial Crisis of 2008, the decrease in residential real estate prices and the progressive cuts in interest rates were sufficient to offset the decline in household disposable income, encouraging, year by year, an improvement in housing affordability. As it is shown below (Figure 15), during the period studied (2007-2017) the evolution of the cost of accessing to the housing market, either for new or second-hand dwelling, it is quite similar, although second-hand values are less sensitive to external shocks (or price variations) than for new dwellings. They tend to move together, though.

In 2012 the cost of accessing the housing market stopped to decrease and, after two years of stability, it began to rise again in 2014. Up to 2017, although the pre-crisis level was not reached yet, but having a cost of the effort of 6-7 means that 6-7 years of full-income are needed to pay the full amount of the property. On top of that, if the disposable income has barely increased, households are increasingly unable to cope with continued price increases, which can be the beginning of a House Affordability Crisis.

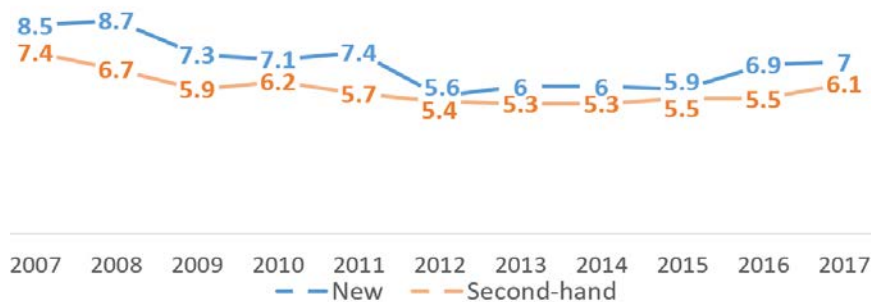


FIGURE 15. Evolution of cost of effort to access the new and second-hand property, 2007-2017. Source: Compiled by authors based on the Database of Ajuntament de Barcelona. Departament d'Estadística i Difusió de Dades.

What is more, the affordability problem does not only have to do with accessing the housing market anymore because rental prices have not stopped increasing. In other words, now households also have to take into account the derived costs of the increase in the rental average prices (Donat, 2018), which makes them harder to access the housing market.

Although having information about the income distribution of the population of Barcelona by age groups would be useful to account for the distributional consequences of the house price appreciation, there is no data available. However, taking into account the life-cycle income streams, young adults are probably the age group who is suffering the consequences more, who have an income below the average. Anyhow, recall *Figure 11* which provides a big picture of the situation, so that it is the age group (16-29 years) who is mainly shifting towards tenancy.

However, by considering the average income, the impact of the house prices on low-income households is not being taken into account, that is why it is convenient to conduct an analysis of the evolution of the cost of affordability for a household at the bottom of the income distribution. To do so,

hereunder, the same methodology as Donat, C., (2018) is followed: a household composed of two people with an income equal to the minimum wage is considered; so that a more intuitive value of cost of affordability can be drawn, based on the proportion of their income allocated to housing expenses.

In 2007, the minimum wage was 570.6€, so that a household of two people might have had an income of 713€. In that case, the household would allocate 140.96% of its income to face an average standard mortgage fee and 80.02% to pay for the monthly rent. Therefore, that household would not have any chance of accessing the housing market and may opt for renting. Therefore the demand for renting in Barcelona for the period studied has increased. However, this latest option, although would improve their situation, would force them to allocate 80,02% of their income to the monthly rent. In short, these households would be far from being able to access housing in Barcelona, neither newly build nor rent, since this latest option, as has shown, would be detrimental in terms of living conditions.

In contrast, the same household in 2017, having now an income of 1032 €per month (minimum wage equal to 900), would allocate 68,62% of their income to pay the mortgage fee and 42.49% to pay the average monthly rent. Thus, the household is better off, either for accessing the housing market or living in tenancy. However, it is still considered as a critical situation since, values higher than 60% and 40% are considered to put households at risk of material deprivation.

Despite the improvement in affordability, experienced between 2007-2017, if house prices keep increasing, the situation can reverse again.

2.1.2 House price appreciation by districts of Barcelona.

The evolution of house prices has followed the same pattern for each of districts of Barcelona, although there is price difference between them (Figure 16), which are correlated with the average income of the districts.

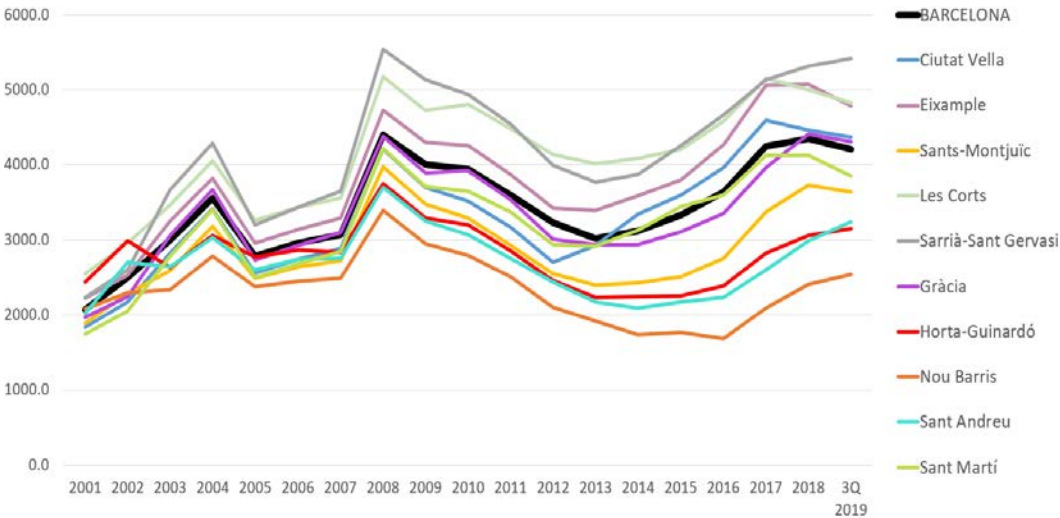


FIGURE 16. Evolution of average house prices by district, 2001-3Q 2019. Source: Compiled by authors based on the Database of Ajuntament de Barcelona. Departament d'Estadística i Difusió de Dades.

However, as it is shown in the chart below (Figure 16 a), in which districts are ranked by level of income, during the Financial Crisis the price sensitivity was higher for low-income districts, except for Ciutat Vella. In addition, this is also applicable for the latter periods, which can be clearly shown in the graph below (Figure 17). In order to interpret it, Figure 16 b) is handy to know the average income of each district at that time. For instance, Nou Barris is the district with the lowest income per capita and it is the same district which experiences a higher increase from 2013 to 2017.

	2008-2013	Top 10	2013	2014	2015	2016	2017
Sarrià-Sant Gervasi	-117.8%	1	Sarrià-Sant Gervasi				
Les Corts	-109.3%	2	Les Corts				
Eixample	-102.7%	3	Eixample				
Gràcia	-107.8%	4	Gràcia				
BARCELONA	-123.4%		BARCELONA				
Sant Martí	-102.2%	5	Sant Martí				
Horta-Guinardó	-139.6%	6	Ciutat Vella			Sants-Montjuïc	
Sant Andreu	-147.0%	7	Horta-Guinardó		Sants-Montjuïc	Ciutat Vella	
Sants-Montjuïc	-119.3%	8	Sants-Montjuïc		Horta-Guinardó		
Ciutat Vella	-75.7%	9	Sant Andreu				
Nou Barris	-137.5%	10	Nou Barris				

FIGURE 16. a) Evolution of variation of second-hand house price by district, 2008-2013. Source: Compiled by authors based on the Database of Ajuntament de Barcelona. Departament d'Estadística i Difusió de Dades. b). Evolution of the territorial distribution of income in Barcelona by district, 2013-2017. Source: Compiled by authors based on the Database of Ajuntament de Barcelona. Departament d'Estadística i Difusió de Dades.

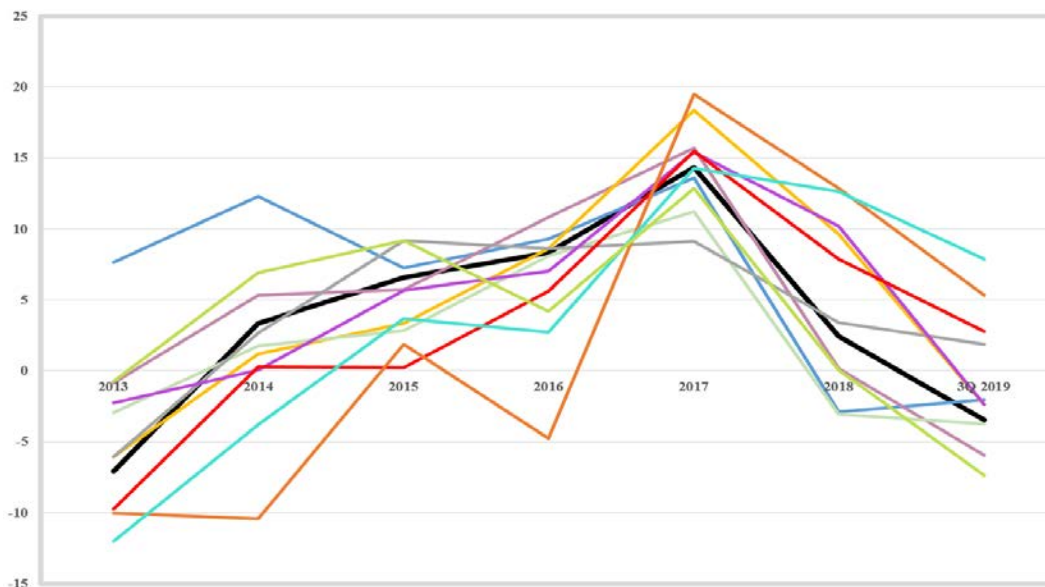


FIGURE 17: Variation rate of house prices (sales) in Barcelona by district, 2013-3Q 2019. Source: Compiled by authors based on the Database of Ajuntament de Barcelona. Departament d'Estadística i Difusió de Dades⁴

⁴ The correlation rate has not been calculated because during the period there was not enough data to get a consistent and unbiased estimator. Besides, the pre-crisis and crisis has not been plotted because it was not easily readable. As the post-period crisis showed the same pattern it has been chosen to reflect the relation between the distribution of rent and the variability of house prices.

On top of that, looking at the evolution of the average level of income of Sants-Montjuïc, it is an example of a district which has experienced a substitution process: going from the bottom of the income distribution to be considered part of the high-income districts.

Moreover, the same price behaviour is found in the rental market, except for Ciutat Vella (Figure 18a)). The higher the average income per capita, the less the variation of prices. What is more, in regards to the average increase in the prices between 2014 and 2018 was 32% (Figure 18b).

	2008-2013		2008-2013	2014-2018	2005-2018
Sarrià-Sant Gervasi	-11.81%	BARCELONA	-15.93%	32.09%	39.21%
Les Corts	-16.44%	Ciutat Vella	-9.47%	27.07%	48.16%
Eixample	-13.88%	Eixample	-13.88%	33.56%	44.68%
Gràcia	-15.90%	Sants-Montjuïc	-17.35%	31.55%	36.80%
BARCELONA	-15.93%	Les Corts	-16.44%	31.88%	34.69%
Sant Martí	-16.64%	Sarrià-Sant Gervasi	-11.81%	30.19%	42.30%
Horta-Guinardó	-22.59%	Gràcia	-15.90%	30.36%	37.92%
Sant Andreu	-19.56%	Horta-Guinardó	-22.59%	31.45%	29.30%
Sants-Montjuïc	-17.35%	Nou Barris	-23.78%	33.57%	26.35%
Ciutat Vella	-9.47%	Sant Andreu	-19.56%	32.51%	30.73%
Nou Barris	-23.78%	Sant Martí	-16.64%	35.49%	43.59%

FIGURE 18. a) Evolution of average rent prices by district, 2008-2013. Source: Compiled by authors based on the Database of Ajuntament de Barcelona. Departament d'Estadística i Difusió de Dades. b) Evolution of average rent prices by district, 2014-2018. Source: Compiled by authors based on the Database of Ajuntament de Barcelona. Departament d'Estadística i Difusió de Dades.

Lastly, regarding the cost of effort of renting by district, it is worrying to see that the vast majority of them are facing rates higher than the 40% (Figure 19). Once again, districts with lower level of income face higher rates of cost of the effort of being in tenancy.

	Cost of effort
Sarrià-Sant Gervasi	38.05%
Les Corts	43.52%
Eixample	46.46%
Gràcia	47.08%
BARCELONA	50.96%
Sant Martí	55.03%
Sants-Montjuïc	52.10%
Ciutat Vella	59.43%
Horta-Guinardó	52.44%
Sant Andreu	56.05%
Nou Barris	65.30%

FIGURE 19. Cost of effort of renting in Barcelona by district, 2018. Source: Compiled by authors based on the Database of Ajuntament de Barcelona. Departament d'Estadística i Difusió de Dades.

3. Assessment of the actual situation of the housing market in Barcelona.

There is no doubt that Barcelona faces significant challenges in the housing market, especially linked to the unaffordability to the rental market, putting tenants at risk of not having the minimum disposable income required to be able to enjoy the minimum level of well-being (referring to stability and security).

It is also important to point out that low-income households will suffer more whenever there is a shock in the housing market. In addition, although a shock in prices would widespread in practically the whole city, the intensity of the decline would be different in each district. Generally, the lower the level of income, the higher the average price decrease; which could be as a result of a sharper adjustment for low-income areas of the city.

Barcelona has also started to suffer one of the consequences of house price appreciation: gentrification. For example, in the case of Sants-Montjuic, where the house prices have increased and, consequently, the housing costs and the average level of income. Hence, it is constraining households either tenure status or the place to live.

In this line, policymakers have been trying to stabilize the price increases. For instance, the Spanish government has approved a decree that entered into force in March 2019⁵ in order to extend the duration of the contracts, established by the "*Ley de Arrendamientos Urbanos*" from three years to five and seven years. This reform is supposed to bring stability to the rental market.

Moreover, the Catalan government has passed a legislative decree⁶ to cap rental prices in neighbourhoods or cities where a lack of affordable housing can be proven. Generally, the rental cost in these areas decreed to have unstable rental markets can only exceed the reference index of rental prices, to be determined by the government per area, by 10%. The price can be extended up to an additional 5% in cases where exceptional views or special features can be justified, such as community pools or gardens. Following the decree itself (*Article 2*), to be declared an unstable rental market and qualify to have the law applied, a "sustained" increase in the rental price and at a cost for families "clearly above the average in Catalonia" must be stated. Otherwise, the law could also be applicable if there was a disproportion between the increase in population and the availability of housing, or if the prices rise significantly above the reference index pricing of the area in question.

All in all, it is important to note that the Spanish Constitution of 1978 (in its article 37) states that all Spaniards are entitled to enjoy decent and adequate housing. Besides, article 25 of the Universal

⁵ *Real Decreto-ley 7/2019, de 1 de marzo, de medidas urgentes en materia de vivienda y alquiler.*

⁶ *Decreto-ley 9/2019, de 21 de mayo, de medidas urgentes en materia de contención de rentas en los contratos de arrendamiento de vivienda y de modificación del libro quinto del Código civil de Cataluña en el ámbito de la prenda.*

Declaration of Human Rights also proclaims that everyone has the right to a standard of living adequate for the health and well-being of himself and of his family.

Considering the current status of the housing market in Barcelona, it seems a constitutional duty to adopt more measures to protect the more vulnerable households. For instance, if there was a reform of the regulatory framework to balance the legal position between landlords and tenants, it would increase the supply of rental housing. In short, it would provide an economic and fiscal stimulus for the market.

D. CONCLUSION

At this point, all the unknowns about the evolution, drivers and consequences of the current upward trend of the house prices have been addressed.

Firstly, as it was concluded, not only does house price inflation is the result of the financialisation of the housing market, but also changes in government intervention, which has shaped the housing market creating an insatiable desire for ownership of all individuals, either for housing or as an investment.

Secondly, the upward trend of housing prices brings economic, social and spatial inequality. Inequality grows between low-income households, who cannot access the housing market and have to face housing increasing costs of the rents with an invariable disposable income and high-income households who take advantage of the market recapitalization. It is also an issue of intergenerational injustice between baby boomers and younger generations. Besides, low-income households are expelled to low-value areas or neighborhoods peripheral urban locations. Lastly, as a result, a dichotomy of social class based on asset ownership, the driver of inequality.

The city of Barcelona is a clear example of how the price appreciation reshapes the city and how it can put the population at risk of housing and material deprivation, due to affordability problems. Even though public authorities have started taking action on the matter, it has given limited results, which calls for more government intervention to safeguard the right to access to adequate housing, in either tenancy or ownership, while deterring the growing inequality caused by capital accumulation and house prices appreciation.

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