BANQUE DE FRANCE
EUROSYSTÈME

Rue de la Banque

No. 55 ■ January 2018

The role of real estate in euro area wealth inequality: lessons from the Household Finance and Consumption Survey

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We analyse the role of real estate in wealth inequality within the euro area using data from the Eurosystem's Household Finance and Consumption Survey. We demonstrate that the level of inequality declines with the homeownership rate. Furthermore, the real estate prices of the properties of the richest homeowners are highest in the most inegalitarian countries. The changes in wealth inequality observed in euro area countries from 2010 to 2014 are essentially the result of the decline in the net value of property wealth (due to both a fall in prices and a rise in debt). The effects vary depending on the countries and wealth groups.

In light of the finding that inequalities are widening, several economists have investigated the role that may be played by changes in asset prices (see Adam and Tzamourani, 2016, and Adam and Zhu, 2016). Changes in asset prices are likely to have an impact on the evolution in inequalities because of the heterogeneity of the composition of household wealth.

This *Rue de la Banque* uses data from the Eurosystem's Household Finance and Consumption Survey (HFCS)[1] to present an original analysis[2] of the role played by real estate in inequality and its evolution in euro area countries from 2010 to 2014. We begin by analysing and documenting two key features:

- real estate accounts for the bulk of household wealth in the euro area, but significant disparities exist between countries;

- since 2010, while wealth inequality has widened slightly across the entire euro area (see Household Finance and Consumption Network (HFCN), 2016), dynamics have differed from country to country.

We then continue by describing the relationship between the changes in inequalities and in the price of real estate assets.

Source and methodology

The HFCS is a unique source of information on the composition and distribution of household wealth in Eurosystem countries. It provides harmonised data, collected directly from households, and can notably be used to measure wealth inequality. It also provides information on household income, consumption and socio-demographic characteristics. For the purposes of this analysis, we use the two waves of the survey currently available. The first wave mainly covers 2010 and the second covers 2013 and 2014.

1 *Detailed information on the survey and its results can be found at:* https://www.ecb.europa.eu/pub/economic-research/research-networks/html/researcher_hfcn.en.html. *Data for France come from the Household Wealth Survey carried out by Insee in partnership with the Banque de France.*

2 *The authors would like to give special thanks to Sylvie Tarrieu for her excellent research assistance.*

We analyse the role of real estate in the levels and evolution of inequality, which is measured on the basis of the share of net wealth[3] held by different wealth groups. The population of each country is broken down as follows, according to a standard approach applied in the literature:[4]

- B50 (for "bottom 50%") – the poorest 50% of households in terms of net wealth;

- M40 or M45 (for "middle 40%" or "middle 45%") – the 40% or 45% of households just above the B50;

- Top 10 or Top 5 – the richest 10% or 5% of households.

Real estate accounts for the bulk of household wealth

The countries studied display a broad range of homeownership rates, from 44% in Germany to 83% in Spain. For all countries, the ratio of households that own their main residence increases with the wealth group and exceeds 90% in the case of the richest households (Top 5, see Table 1).

Real estate and household debt

		Euro area[a)]	DE	ES	FR	IT
Homeownership rate (%)	B50	31.5	10.0	70.1	22.4	39.5
	M45	88.5	77.1	96.1	89.1	96.8
	Top5	94.3	92.1	96.6	91.8	98.7
	Total	**60.3**	**44.3**	**83.1**	**55.8**	**68.2**
Indebted households rate (%)	B50	41.4	45.9	52.4	40.9	22.6
	M45	42.8	44.0	46.4	52.5	19.7
	Top5	44.1	47.4	45.0	57.2	20.7
	Total	**42.2**	**45.1**	**49.3**	**46.9**	**21.2**
Proportion of net wealth represented by main residence (%)	B50	296.9	467.4	127.7	191.5	105.2
	M45	72.8	72.8	63.9	70.9	74.5
	Top5	32.8	34.3	26.6	25.9	43.8
	Total	**61.9**	**55.3**	**58.5**	**57.7**	**67.7**
Debt-asset ratio (%)	B50	63.0	81.9	51.4	52.6	44.4
	M45	19.7	24.7	15.8	19.3	12.7
	Top5	8.4	8.2	8.4	8.0	8.4
	Total	**21.4**	**21.5**	**21.0**	**19.4**	**17.8**

a) Euro area: weighted average by country size.
Countries studied: AT: Austria, BE: Belgium, CY: Cyprus, DE: Germany, ES: Spain, FI: Finland, FR: France, GR: Greece, IT: Italy, LU: Luxembourg, MT: Malta, NL: Netherlands, PT: Portugal, SK: Slovakia, SI: Slovenia
Sources: HFCS second wave, authors' calculations.
Note: the homeownership rate represents the percentage of households that own their main residence, based on the HFCS harmonised definition, and excluding usufructuaries. The percentage of net wealth represented by the main residence is calculated for homeowners and is stated at over 100% when the household is in debt and the value of the residence exceeds the net wealth of the household. The debt-asset ratio is calculated for indebted households.

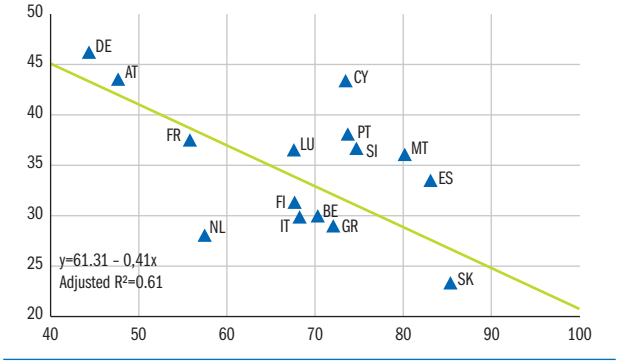
Real estate (all property combined) accounts for the bulk of homeowners' household wealth, amounting to 81%[5] of their average net wealth for the countries studied. If the value of the main residence alone is considered, this figure comes out at 62%, and, within the euro area's four largest countries, ranges from 55% to 68% in Germany and Italy, respectively. In all countries, this proportion decreases as the level of household wealth rises, reflecting the greater diversification of wealth in well-off households. For low-income households (B50), the proportion exceeds 100% due to their level of debt.

The level of inequality in a country declines as the homeownership rate of poorer households increases

As Chart 1 demonstrates, the level of a country's wealth inequality and its homeownership rate are negatively correlated: real estate can play an "equalising" role.[6]

C1 The homeownership rate and the level of inequality

(x-axis: homeownership rate; y-axis: wealth share of the Top 5)



Countries studied: see Table 1.
Sources: HFCS second wave, authors' calculations.

3 *Net wealth is defined as the sum of the assets held by households (real estate, financial, durable goods), minus debt.*
4 *See Saez and Zucman, 2016, and Garbinti et al., 2017.*
5 *Calculated as total real estate assets over total net household wealth, taking into account individual weights and country sizes.*
6 *For the purposes of this study, the wealth share of the Top 5 richest households is taken as the main indicator of inequality. The results are comparable to those using other indicators (Gini, Top 10, Theil). Kaas et al. (2015) obtained similar results from the first HFCS wave (using Gini). For statistical sampling reasons, Household Finance and Consumption Surveys can underestimate the wealth of the richest households, leading to levels of inequality being understated to varying degrees depending on the sampling techniques used in each country. Consequently, the results presented in this study can be considered as a "lower-bound" estimate of inequality.*

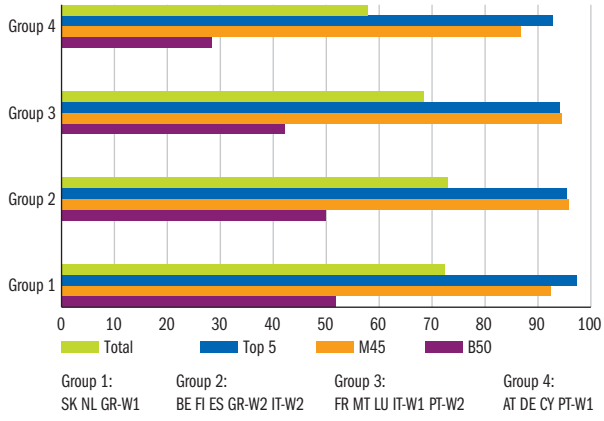
However, this role is ambivalent: depending on the homeownership rate, an increase in property prices can lead to a decline in inequality but can also make getting on the property ladder more difficult (see Bonnet et al., 2017, for example).

In order to highlight the role of the real estate held by the least well-off, we use data from the two HFCS waves and group the countries according to their levels of inequality.[7] We define four country groups on the basis of the wealth share of the Top 5 in each country,[8] with group 1 as the most egalitarian and group 4 the least.[9] We then compare the homeownership rates between these country groups (see Chart 2).

The average homeownership rate in the most egalitarian countries (Slovakia, the Netherlands and Greece) is 72%, falling to 58% in the most inegalitarian (Austria, Germany, Cyprus and Portugal). This difference can be primarily explained by the homeownership rate among the poorest 50% of households: more than half of B50 households own their main residence in the most egalitarian countries, but this rate falls to less than 30% in the most inegalitarian countries. By contrast, the difference is negligible for the richest population groups (M45 and Top 5), for whom homeownership rates exceed 92%.[10] It therefore seems clear that the real estate holdings of the poorest 50% of households illustrate a country's level of inequality.

C2 Homeownership rates by wealth group and level of inequality

(x-axis: homeownership rate in %; y-axis: country groups by increasing level of inequality, defined as the wealth share of the Top 5)



Sources: HFCS first and second waves, authors' calculations.
Note: country groups are compiled on the basis of the wealth share of the Top 5 in each wave (see footnote 8). Where necessary, W1 and W2 specify a country's classification depending on the wave.

The level of inequality in a country also reflects higher real estate prices for the property of the richest homeowners

There is another key factor in addition to the number of homeowners: the price of real estate assets that a household can afford. Indeed, while the purchase price of real estate assets differs according to the level of household wealth, this can explain significant inequalities between homeowner households within a country. To substantiate this point and to compare the heterogeneity of real estate assets between countries, we use a simple indicator of the price payable by each wealth group in the same country.

In order to calculate this indicator, we divide the average value of homeowners' main residences within each wealth group (B50, M45 and Top 5) by the average value of the main residence for all homeowners in the country (see Chart 3).

The countries with the lowest level of inequality – and the highest homeownership rates (see above) – are also those where the average value of the main residence is the most modest (EUR 145,000). The most inegalitarian countries (group 4) have the widest gaps between wealth groups in terms of main residence average values. The value of the main residence of the poorest homeowner households (B50) is less than half that of the average (a ratio of 0.43) while the value of the richest (Top 5) households' main residence is more than double the average (a ratio of 2.5), probably reflecting differences in the credit market, location and size, as well as housing policies.

7 As the sample taken in Slovenia was too small during the first wave, it has been excluded from the change analysis.

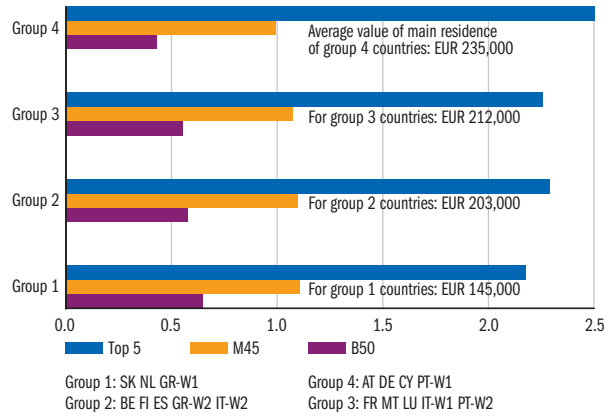
8 More precisely, we categorise the countries into four groups of the same size (quartiles) according to their level of inequality measured on the basis of the wealth share of the Top 5. Group 1 thereby represents a quarter of all the countries and corresponds to those countries where this share is smallest (the least inegalitarian). Group 4 represents the quarter of the countries where this share is highest (the most inegalitarian).

9 The indicator of inequality chosen (Top 5, Top 10, Gini coefficient) has very little impact on the composition of these country groups. The only differences concern the Netherlands, which falls into group 4 using the Gini coefficient but group 1 when applying the Top 5, and, to a lesser extent, Malta (groups 1 and 2 for the first and second waves respectively using Gini, and group 3 with Top 5). The analysis is robust when the M40 and Top 10 groups are considered instead of M45 and Top 5.

10 With the minor exception of group 4, in which the rate of households that own their main residence among the M45 is lower at 88%.

C3 Relative price (compared to the average) of the main residence by wealth group and level of inequality

(x-axis: ratio of the average value of a wealth group's main residence over the average value of a main residence for the country's population as a whole; y-axis: country groups by increasing level of inequality)



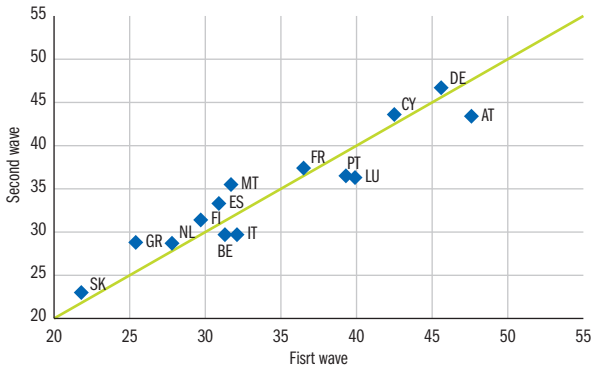
Sources: HFCS first and second waves, authors' calculations.
Note: the relative price of the main residence is the average value of a wealth group's main residence (within a country) as a ratio of the average value of the main residence of all the country's homeowners. Country groups are compiled on the basis of the wealth share of the Top 5 in each wave (see footnote 8). Where necessary, W1 and W2 specify a country's classification depending on the wave.

From 2010 to 2014, while wealth inequality widened slightly across the entire euro area, dynamics differed from country to country

Over the period, wealth inequality widened slightly for all euro area households (see HFCN, 2016). Based on the wealth share of the Top 5, this growth in inequality affected 10 of the 14 countries studied (see Chart 4).[11]

C4 Change in the wealth share of the richest 5% from 2010 to 2014

(x-axis: wave 1; y-axis: wave 2)



Countries studied: see Table 1.
Sources: HFCS first and second waves, authors' calculations.

The net wealth of almost all groups declined, but to varying degrees

It is striking that in the countries where inequalities widened the most (group 4),[12] the average wealth of low-income households and the middle class dropped far more significantly (down 41% for the B50 and 22% for the M40) than the wealth of the richest 5% (down 12% for the Top 5) – see Chart 5. By contrast, the countries where inequalities narrowed the most (group 1) were those where the middle class became richer while the average wealth of the rest of the population declined.

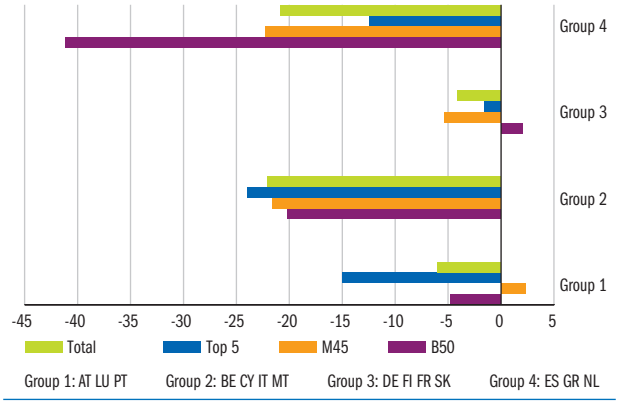
Changes in inequality in country groups 2 and 3 were moderate, but with different profiles. Within group 2, the very small change in inequality is a result of a decline in average net wealth that affected the richest households (Top 5) more than the rest of the population. Group 3 countries saw a change in the

11 Based on the wealth share of the Top 10, 7 of the 14 countries studied witnessed a growth in inequality.

12 More precisely, adopting the same process as previously (for country groups categorised by level of inequality), we now classify them on the basis of the change in inequality (again measured on the basis of the wealth share of the Top 5) from 2010 to 2014. Group 4 represents the quarter of the countries where inequality widened the most (up 10.2%). Group 1 represents the quarter of the countries where inequality narrowed the most (down 9.9%). The composition of the country groups is virtually identical if the distribution of the change in the wealth share of the Top 10 is considered instead, with only Italy and Portugal swapping places between group 1 and group 2.

C5 Changes in average net wealth and inequalities

(x-axis: change in % in average net wealth between first and second waves; y-axis: country groups by increase in inequality between first and second waves, defined as the wealth share of the Top 5)



Sources: HFCS first and second waves, authors' calculations.
Note: the countries are grouped on the basis of changes in the wealth share of the Top 5 between the first and second waves, in constant euro (see footnote 12).

overall wealth of the population that was more limited than in other countries.[13]

The change in inequality mainly reflects the varying trends in real estate prices

If we consider the contributions of the three components of net wealth – real estate, financial assets and "other"[14] – it appears that the change in net wealth in all the country groups is mainly due to real estate.[15]

The net value of property wealth was forced down by both the fall in real estate prices and the rise in debt.[16] The fall in real estate hit the majority of countries, and sometimes very hard, with prices in Greece and Cyprus falling on average by 37% and 31%, respectively. Only Germany and Finland (up 5% and 6%, respectively), and to a lesser extent Austria, recorded average increases in real estate prices.[17] The indebted households rate (mortgage debt and other) tended to decline. However, as a proportion of the value of the assets, the weight of household debt increased by 11% across the countries as a whole, and as much as 38% in Italy and 75% in Cyprus.

By contrast, the homeownership rate remained relatively stable within each country. Despite the low interest rates during the period, it does not appear that there was a significant number of first time buyers, or purchases or changes of main residences by households that already owned homes, irrespective of the wealth group.[18]

13 *The methodology for measuring durable goods was modified between the first and second waves of the French survey. This modification had an impact on the first deciles of the distribution of net wealth. We have ensured that the results obtained in this study are robust to this change in methodology: excluding this aspect of wealth, the results are similar.*

14 *Durable goods (cars, jewellery, works of art, etc.).*

15 *Note that unlike the group 1 and group 2 countries, the financial wealth of the Top 5 households in the countries of groups 3 and 4 increased.*

16 *Mortgage debt accounts for the bulk of household debt in the euro area (almost 85%).*

17 *Within the euro area countries, we can see varying trends in the value of the main residence, which are likely to be linked to the characteristics of the properties or their location, depending on the wealth groups.*

18 *There were no major differences in the distribution of main residence holding periods between the first and second waves.*

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Published by
Banque de France

Managing Editor
Olivier Garnier

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Production
Press and Communication Department

January 2018
www.banque-france.fr