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Patterns of Housing Wealth Inequality across Europe

EqualHouse report for workpackage 3 *'Profiling and Explaining the Scale, Character and Interaction of Income, Wealth and Housing Inequalities in Europe'*



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Country codes used in this report

CODE	COUNTRY NAME
BE	Belgium
BG	Bulgaria
CZ	Czech Republic
DK	Denmark
DE	Germany
EE	Estonia
IE	Ireland
EL	Greece
ES	Spain
FR	France
HR	Croatia
IT	Italy
CY	Cyprus
LV	Latvia
LT	Lithuania
LU	Luxembourg
HU	Hungary
MT	Malta
NL	Netherlands
AT	Austria
PL	Poland
PT	Portugal
RO	Romania
SI	Slovenia
SK	Slovakia
FI	Finland
SE	Sweden
UK	United Kingdom

Housing regimes glossary used in this report

Housing regime	EU countries	Definition in this report
Social Democratic Unitary rental market countries	Denmark, Sweden, Finland, Netherlands	<ul style="list-style-type: none"> In the unitary rental market housing-welfare regime, is characterised by a large rental market where both social and private housing providers compete in the same market. The state plays a strong role in regulating rents and ensuring affordability.
Conservative-Corporatist Unitary rental market countries	Germany, Belgium, Austria, Luxembourg	<ul style="list-style-type: none"> Similar to the social democratic model but with greater involvement of non-profit, cooperative, and employer-led housing. The rental sector is well-developed, and homeownership is not a dominant aspiration.
North-Western European (NWE) ownership: dual rental market countries	Ireland, UK	<ul style="list-style-type: none"> The dual-rental market housing-welfare regime is characterised by high homeownership rates. This was/is historically promoted by the government through tax subsidies and mortgage support for (low-income) households.
Southern European family-based homeownership countries	Italy, Greece, Cyprus, Portugal, Spain	<ul style="list-style-type: none"> This regime relies on intergenerational wealth transfers to facilitate homeownership, with weak rental markets and minimal public intervention. Housing serves as a form of welfare due to limited state support. It is characterised by minimal state intervention, small/underdeveloped social housing sector and a poorly regulated private rental sector.
Baltic countries	Estonia, Latvia, Lithuania	<ul style="list-style-type: none"> Post-socialist systems with high homeownership rates due to mass privatisation, but weak rental markets and limited state support for affordability.
Central and Eastern European (cee) countries 'Post soviet'	Poland, Czechia, Slovakia, Slovenia, Bulgaria	<ul style="list-style-type: none"> Similar to the Baltic model, but with higher levels of informal housing and a legacy of state withdrawal from housing provision. Homeownership remains the dominant tenure, but affordability varies. There have been dramatic changes since the collapse of communism in the early 1990s.

1. Introduction

Across European countries, housing wealth is the most significant form of wealth for the typical household. It thus represents an important proportion of total wealth across the population-wide wealth distribution. Nonetheless, for many years, the analysis of housing wealth has occupied a somewhat marginalized position within the broader field of wealth inequality analysis. The complexity of analysing a wealth component that amortizes over the life course and constitutes a “*awkward hybrid of asset, debt and consumption good*” (Smith et al., 2022, p. 4) does not align well with the regular concept of total net ‘marketable’ household wealth typically used in wealth research. To start with, a substantial segment of the population (i.e. renters) has neither negative (i.e. mortgage debt) nor positive housing equity (i.e. housing wealth): they have no housing wealth. Secondly, the level of housing wealth varies over the life course: younger homeowners tend to have more mortgage debt than housing equity, whilst many homeowners above retirement age are outright owners. Thirdly, the extent of mortgage financing, as well as absolute levels of housing wealth (also related to the quality of housing), strongly vary across the enlarged European Union (EU). Such between-household and between-country differences are obscured in current comparative research. The latter is more or less exclusively focused on summary measures of *relative* net wealth inequality, in particular the wealth-based Gini and related econometric decompositions. Recent studies have mostly investigated the aggregate, negative, country-level association between homeownership rates/housing wealth inequality and inequality of (net) total wealth. This particular focus, however, provides only a limited understanding of between-country differences associated with housing-welfare regimes, and of between-household differences linked to relevant intersections, such as age/cohort or degree of urbanization.

It was discussed in companion reports to this, how during the post-war decades, the expansion of housing finance and homeownership to ever-larger sections of the population, accompanied by more or less sustained real house price growth, contributed to reducing (relative) wealth inequality across many European countries (e.g. Soaita et al., 2020). Reduction of wealth and societal inequalities in terms of granting a larger number of moderate-income households’ access to owner-occupation and housing wealth,

justified by the presumed associated social and economic benefits of owning (housing) assets, is at the root of housing policy and regulation. Historically, in many countries, homeownership has been (and still is) the ideologically preferred tenure and has been supported generously by subsidies and taxation (e.g. Causa & Woloszko, 2020; Fatica & Prammer, 2018; Kemeny, 1981; Ronald, 2008; Saunders, 1990).

Roughly since the 1980s, large-scale housing system changes pertaining to housing commodification and financialization have contributed to a gradual process of tenure restructuring and concomitant changing tenure relationships (also see Dewilde & Haffner, 2022; Dewilde & Waitkus, 2024). Although these broader system changes differ in intensity and form across European countries characterized by different housing-welfare regimes, these long-term trends are exemplified by declining access to housing finance and/or homeownership (e.g. Dewilde, 2020; Forrest & Hirayama, 2018; Lennartz et al., 2016; Smith et al., 2022) limiting pathways of housing wealth accumulation for currently young adults and more vulnerable social groups. Next to growing polarization between *housing market insiders* (benefitting from housing asset inflation) and *housing market outsiders* (excluded from accessing homeownership and housing wealth), housing wealth inequality also seems to be on the increase *within* the homeowner segment (e.g. Dewilde & Flynn, 2021). Increases in wealth inequality between homeowners could be expected to arise, as returns to housing (i.e. more or less profitable housing wealth accumulation pathways) have become more strongly intersected with socio-economic (dis)advantage. There seems to be an overall expectation that, in recent times, the inequality-mitigating properties of housing wealth might have become less evident. In other words, ownership of housing might have lost (some of) its 'feathers' as 'the great equalizer'.

Though increasingly documented in single-country (case) studies (e.g. Arundel, 2017; Arundel & Ronald, 2021), systematic comparative evidence across European countries is currently largely lacking. In this more descriptive report, we start tackling this lacunae by a descriptive exploration of cross-sectional patterns in (housing) wealth inequality across European countries, present in the latest wave of the HFCS (Household Finance and Consumption Survey, ECB, 2010-2021). We use multiple measures capturing different aspects of the distribution of (housing) wealth and move away from the singular focus of recent comparative work on summary measures of relative wealth inequality. The report

starts with a brief state-of-the-art literature review, followed by a section on data and methodology. We then present mostly descriptive analyses of comparative differences in, as well as relationships between, housing wealth and total wealth, moving from a focus on relative wealth inequalities to a comparison of absolute wealth levels. The final section of the reports starts to unpack three intersections that speak to currently ongoing debates: **income, age/cohort** (in particular, comparative differences regarding the changing housing wealth position of younger generations (e.g. Dewilde & Flynn, 2021)) and **the degree of urbanization** (in particular, regarding differential housing wealth dynamics depending on urban or rural places of residence (e.g. Galster & Wessel, 2024)).

2. Varieties of wealth inequality across Europe: more questions than answers

“Capital is back”. In the ten years since Piketty’s seminal publication and notwithstanding heated debate regarding theory, focus, data, and methodology put forward in *Capital in the Twenty-First Century* (Piketty, 2014), there is no doubt that wealth should be promoted to the forefront of inequality research. This pertains even more to issues of housing wealth, given its importance for ‘common’ households and in light of the fact that, roughly since the 1980s, house price inflation has turned into an increasingly important driver of total wealth (Fuller et al., 2019; Jordà et al., 2019; Maclennan & Miao, 2017). Systematic, comparative, and in-depth research into the distribution of housing wealth across the general population has, however, remained scant. Traditionally, long-term historical research on wealth focused on elites, using a variety of administrative sources such as estate, wealth, or capital income tax returns (more recently complemented by so-called *rich lists*) in order to trace trends in inequality and concentration at the top of the wealth distribution (König et al., 2020; Piketty & Zucman, 2014; Roine & Waldenström, 2015).

Population-wide, representative, detailed, and comparative micro-level wealth information, in particular across Europe, only became available since the collection of the Household Finance and Consumption Survey (HFCS, European Central Bank). So far, a comparative framework aimed at identifying and theorizing institutional determinants of cross-national variations in wealth (levels, inequality, concentration) has not yet been

developed. Cowell et. al. (2018, p. 332), for instance, find that although *“there is considerable cross-country variation in levels of household wealth and in wealth inequality [...] the biggest share of cross-country differences is not attributable to the distribution of household demographic and economic characteristics but rather reflect strong unexplained country effects”*. A particular case in point is the consistently returning finding that levels of wealth inequality tend to be ‘unexpectedly high’ in Northern-European countries with a social-democratic (universalistic) welfare state. These countries combine below-average income inequality with above-average wealth inequality (Skopek et al., 2015). Difficulties in explaining comparative variations in wealth (inequality) have been attributed to the fact that wealth is composed of diverse components that are rather different in nature, and that are owned by different types of owners (e.g. Heidenreich, 2022; Pfeffer & Waitkus, 2021). Accumulation of these different types of wealth is influenced by various set of institutional arrangements: pension systems, housing-welfare regimes, general taxation, the presence and value of private (family) wealth, and inheritance tax. Some of these wealth components, furthermore, have been accumulated over generations and are less reflective of current institutional arrangements.

More recent work has started to explore the contribution of housing wealth (inequality) to total wealth (inequality). Pfeffer and Waitkus (2021: 567), for instance, have shown that comparative variation in net wealth inequality is centrally driven by differences in inequality and concentration of housing equity. Several other studies have also focused on the negative correlation between homeownership and (net) wealth inequality, for varying sets of countries. Kaas et al. (2019) investigated this correlation for a selection of nine Western- and Southern-European countries: Austria, Belgium, France, Germany, Greece, Italy, the Netherlands, Portugal, and Spain. They concluded that this negative correlation persists when controlling for alternative sources of variation, such as differences in household structure and household income. Decomposition analyses of the wealth-based Gini-coefficient further show that the negative relationship between homeownership and relative wealth inequality mainly comes about through cross-national variation in the wealth position of households in the bottom half of the wealth distribution (also see Causa et al., 2019). The higher the homeownership rate, the lower-

wealth households tend to own rather than rent. At the same time, in countries with more homeowners, less wealthy households tend to be comparatively richer (and hence have wealth levels that are relatively closer to those of richer households) compared with less wealthy households in countries with less homeowners. This is attributed by the authors to potential differences in savings behavior between owners and renters, but they do not really delve into levels of housing wealth and non-housing wealth, apart from the finding that the average renter is much poorer than the average owner in all countries. Hence, where poorer homeowners own at least some level of housing wealth and non-housing wealth, poorer renters across all countries tend to own much smaller levels of non-housing wealth. Similar findings are reported by Brzezinsky and Salach (2021, p. 8) for five Central- and Eastern-European countries (Estonia, Hungary, Latvia, Poland, and Slovakia). This study, additionally, controlled for potential bias arising from disproportional non-response or under-reporting of wealth by richer households, by correcting top wealth shares using survey and external wealth data from so-called rich lists. Again, it is found that *“cross-country differences in the distribution of homeownership rates account for most of the disparities in the bottom part of the wealth distribution in CEE-countries”*. It is, in other words, the tenure structure that drives comparative differences in wealth inequality: renters generally do not accumulate non-housing wealth to the same extent as homeowners accumulate housing wealth. This pattern partly explains ‘unexpected’ high levels of wealth inequality in social-democratic welfare states: these countries also tend to have larger (social) rental sectors.

Though the above-cited research arrives at very similar findings for different groups of countries, both the theoretical and methodological scope of these studies is rather specific, focusing on *relative* (total) net wealth inequality (hence ignoring variations in net wealth levels across the life-course and between countries with less and more mortgage financing), and using econometric methods revolving around the decomposition of the wealth-based Gini-coefficient. This approach does not readily allow to take account of qualitative differences between housing-welfare regimes (e.g. in terms of absolute levels of housing wealth) and leads to results that are somewhat hard to ‘unpack’, as housing wealth is not easily separated from other forms of wealth. The focus on summary measures of total net wealth across the whole population, furthermore, also

makes it rather difficult to deal with important intersections, such as income, age/cohort, or degree of urbanization. This report therefore attempts to provide a somewhat broader descriptive profile.

3. Data, concepts, and measures

3.1 Data

In this report, comparable data from HFCS (Household Finance and Consumption Survey, ECB, 2010-2021) are analysed (e.g. ECB, 2023a). This repeated cross-sectional survey currently has four waves (2010-2014-2017-2021). The focus of this report is on the last wave, covering 22 countries. Additionally, data for Poland, one of the largest and strongest economies in Eastern-Europe, were added from the third wave. For sample sizes by wave and country, see the Appendix to this report.

HFCS collects representative wealth data for private households in the Euro-area, as well as the Czech Republic, Croatia, and Hungary. A household is defined as a person living alone or as a group of people living together in the same private dwelling and sharing expenditures as well as the joint provision of the essentials of living (i.e. contributing to and benefiting from household expenses). The survey covers assets held and liabilities incurred, including assets and liabilities abroad. The current value of households' private pension plans and life-insurance policies is included. The value of public and occupational pension schemes – due to difficulties of reliably measuring such assets in the case of unfunded pension schemes and given the fact that these forms of wealth are generally not 'marketable' – is not covered. Access to public services (e.g. medical services) is also not part of the standard measurement of household wealth (OECD, 2013) and therefore not covered by the survey. It is unclear to which extent the exclusion of social security wealth (mostly pension wealth but also the (implicit) financial benefits associated with social rents) – accrued by paying social contributions and taxes, and accessible via social rights – might distort comparisons of the wealth distribution in so-called homeownership countries vs. the housing-welfare regimes with a larger unitary rental market. In the latter, the so-called 'tenure wealth gap' between generally wealthier owners and generally less wealthy renters tends to be smaller. Renters in unitary rental markets – given more affordable (social) rents and higher generosity of welfare transfers

in general – are better able to accrue significant levels of financial wealth (Causa et al., 2019; Lersch & Dewilde, 2018; Wind & Dewilde, 2019), compared with similar renters in other housing-welfare regimes. On the other hand, research consistently finds that, even in these countries, homeowners tend to own larger amounts of non-housing wealth compared with similar tenants. This has been ascribed to factors such as different propensities to save, selection bias (i.e. people entering homeownership are ‘of a different kind’, for instance in terms of their propensity to save), and the distortion of public support towards homeownership, putting renters in a more disadvantaged position in terms their opportunities for the accumulation of non-housing wealth (e.g. Causa & Woloszko, 2020; Fatica & Prammer, 2018; Keister et al., 2016; Lersch & Dewilde, 2018).

The Methodological Report of Wave 4 discusses the impact of the COVID-19 epidemic on the fieldwork, response rates, and mode of interviewing in HFCS. In several countries, the fieldwork was postponed or interrupted, meaning that the fieldwork period for wave 4 ranges from 2 months (Luxembourg and the Netherlands) to 25 months (Czech Republic). Reference years for the wealth-variables, as recorded in the data, range from 2019 to 2022. This is, however, not very different from previous waves, with reference years ranging from 2016 to 2018 in wave 3, for instance. In HFCS-documentation, this issue is usually solved by applying the relevant inflation adjustment factor when presenting results. In most countries, there was also a drop in response rates in relation to wave 3. The most important impact of COVID-19 pertains to the mode of interviewing, as most households were interviewed via CATI (computer-assisted telephone interview) rather than CAPI (computer-assisted personal interviewing), the most prevalent mode of interviewing in the first three waves (ECB, 2023b). All in all, in terms of established findings and data patterns based on previous research from various sources, the results from wave 4 reported below do not seem to point at the existence of large distortions.

3.2 Concepts

Similar to the distributional analysis of income, the distributional analysis of wealth is bound to more or less agreed-upon, but also somewhat arbitrary conventions (e.g. Atkinson & Bourguignon, 2015; Atkinson et al., 2002; OECD, 2013). Though (disposable) (annual) household income, by default, pertains to the household-level, the household

income is normally attributed to each household member, as well as standardized for the size and composition of the household by means of an equivalence scale (accounting for economies of scale and assumed lower costs of younger children). The welfare of each individual in the population, including children, is hence accounted for. While income measures attempt to capture the flow of resources, wealth, on the other hand, pertains to the stock of resourced accumulated over time and pooled by different household members. Wealth inequality measures, therefore, usually pertain to the household as an economic unit, and tend not to be equivalized. In recent years, however, and perhaps with the increased availability of micro-level wealth data, interest in the so-called 'joint distribution of income and wealth' has increased. In the latter approach, the income and wealth distributions are not analysed separately as independent proxies of economic well-being but assessed together. Some population groups, for instance, tend to be income-poor but asset-rich (e.g. the elderly) or vice versa (e.g. the young) (e.g. Kuypers & Marx, 2019). When combining information from both distributions, it furthermore makes sense to equivalize household wealth, in the same vein as is done for disposable household income (e.g. Skopek et al., 2015). In sum, the level of analysis in this report is the household level (as in the regular analysis of wealth), while both wealth and income are equivalized (as in the regular analysis of income). We use the modified OECD-equivalence scale.

Given our specific focus on housing, we also divert from some other more typical conventions (similar to e.g. Dewilde & Flynn, 2021). To start with, the main distinction made in this report is between *housing wealth* and *non-housing wealth*. Housing wealth includes the (gross or net) current market value of the main residence as well as other real estate, but excludes property related to the households' own business activities (e.g. a shop, workshop). Housing wealth can hence pertain to (multiple) properties aside from the household main residence and is assessed by respondents themselves. Recent research comparing objective and subjective (self-reported) home values has shown that the latter are generally a good proxy for the former, specifically in relation to the study of wealth inequality (e.g. Tomal, 2022). Non-housing wealth includes total financial assets plus non-housing real assets: vehicles, other valuables (e.g. jewellery), as well as the value of value of self-employed businesses, including real estate property related to one's

business activities. Total wealth is the sum of housing and non-housing wealth. Net housing wealth pertains to the value of gross housing wealth minus outstanding mortgage debts. Net non-housing wealth pertains to the value of gross non-housing wealth minus the outstanding balance of other, non-mortgage, liabilities. In the HFCS, it is, unfortunately, not possible to distinguish between social and private renting.

As indicated before, it makes sense to employ a joint income and wealth-perspective, as a way to address the intersection between (housing) wealth and income. This means that analyses in this report not only pertain to the wealth distribution as such but also describe levels of wealth across income quintiles or tertiles (depending on sample sizes). This choice is based on several substantive as well as methodological arguments. For one, access to housing finance and property-ownership is strongly determined by the income level of a household. Secondly, income and wealth are not highly correlated. As a stock-measure, wealth inequality tends to be higher than income inequality, and the level of wealth inequality is not systematically related to the level of income inequality (Causa et al., 2019; Keister & Moller, 2000). Describing intersections between different economic dimensions contributes to identifying and understanding configurations of economic and material well-being vs. vulnerability (e.g. Kuypers & Marx, 2019) and is helpful in analysing the dynamics of wealth. For example, summary housing wealth inequality measures could, in principle, remain relatively unchanged (e.g. when house prices decline, on average, to the same extent for all levels of housing wealth), whilst at the same time housing wealth could become more or less concentrated within particular income groups, as some income groups acquire more (valuable) properties whilst other income groups do not manage to access homeownership in the first place (Dewilde & Flynn, 2021). Thirdly, whilst regular wealth or income summary inequality measures usually apply to the whole population (few households have literally zero income or wealth), housing wealth only pertains to those who own houses. In countries where the majority of households rent, the median level of housing wealth is 0. This complicates the calculation of various measures, such as the P90/P10 ratio or housing wealth holdings/shares by wealth groupings (e.g. wealth deciles).

Though initially we present measures in terms of both gross and net (housing) wealth, when analysing housing it often makes more sense to focus on gross housing wealth

(Dewilde & Flynn, 2021; Owen & Pryce, 2024). Both the amortization of mortgages over the life-course, as well as the opposite process of equity withdrawal, might lead to significant differences between a household's net housing equity, and the amount of gross housing wealth they will own or have owned. Substantive interest, furthermore, lies with unequal opportunities terms of housing wealth accumulation pathways, and the factors impacting on this, such as uneven capital gains arising from differential house prices appreciation (intersecting with socio-economic (dis)advantage or degree of urbanization), or the uptake of Buy-to-Let mortgages by high-income households in order to finance the procurement of multiple properties. In sum, in this report we are more interested in the life-time accumulation of housing wealth, rather than in "*snapshots of net wealth at arbitrary time points*" (Owen & Pryce, 2024, p. 72). A focus on gross housing wealth also hugely facilitates comparisons of housing wealth between countries with different levels of mortgage finance, especially since our focus includes Eastern-European countries, and allows for cohort comparisons.

3.3 Measures

In the HFCS, only gross household income is available. Regarding the income distribution, we report the Gini-coefficient and the S80/S20 income quintile ratio: the ratio of total income owned by the top income quintile to that of the bottom quintile. We describe these as 'summary inequality measures' to indicate these are single-indicator measures. Regarding the wealth distribution, we report the Gini-coefficient as well as one summary wealth inequality measure intersected with income: the ratio of total wealth owned by the top income quintile to that of the bottom quintile (also indicated as S80/S20). Whereas the GINI-coefficient takes into account all households relative to one another (and hence obscures differences across income and wealth distributions in terms of where in the distribution exactly the largest relative inequalities are located), S80/S20-measures simply compare rich and poor segments of society. Both summary-measures hence evaluate different aspects of the relative inequality distribution. We furthermore report the concentration of housing wealth within income quintiles or tertiles (depending on sample sizes). We describe these wealth inequality measures as 'across the income distribution' to highlight the additional context they provide. Income quintiles/tertiles are

defined at the level of the sample selection to which the respective analyses pertain (see further). To assess the concentration of wealth, we take the amount of wealth each income quintile holds as a share of the sum total of all wealth (for the relevant sample selection). Income and gross wealth variables were bottom-coded at 1; income has been top-coded at 10 times the median and wealth variables at the 99th percentile. All measures are country-specific and appropriate weighting factors (see below) have been applied in their calculation.

Monetary amounts from different reference years are expressed in 2021-prices, based on the Consumer Price Index (UNECE). Monetary amounts are not corrected for different purchasing parities across countries. Houses are very expensive goods of which the prices varies across regions and levels of urbanization; applying country-level PPP's might introduce large unknown errors. The price of a house is likely more difficult to compare across countries than the price of a bread: one does not buy a bread with a mortgage, for instance. Breads across countries are, furthermore, of more or less the same quality, which cannot be said about houses. The quality of the housing stock varies widely between countries, but also within countries. A disadvantage of not adjusting for differences in price-levels between countries is, however, that, for dwelling of the same quality, we possibly over-estimate comparative differences in levels of housing wealth and non-housing wealth.

All analyses use survey-provided weights (correcting for unequal probabilities of households being selected into the sample due to survey design (e.g. oversampling of wealthy households) and selective non-response), as well as the five imputates arising from the multiple imputation of missing income and wealth components (ECB, 2023a). As the focus of this report is on the importance and distribution of housing and non-housing wealth across the general population, no additional efforts have been made to adjust for likely remaining under-reporting of wealth ownership at the very top of the wealth distribution.

4. Empirical analyses

4.1 A birds' view on homeownership, income inequality, and wealth inequality across European countries

To get a feel for cross-national variations in wealth across housing-welfare regimes, we start with some overall descriptives. From Table 1, we see that, in general, homeownership rates calculated from HFCS at the household level are rather similar to those derived from EU-SILC and reported at the individual level. Mortgaged homeownership is, as can be expected, highest in the North-Western-European (NEW) dual rental market countries, where historically mortgaged-financed homeownership was strongly favoured by public policy (e.g. Kemeny, 1981; Ronald, 2008; Saunders, 1990). This, however, also goes for the Netherlands, a country that has in recent decades shifted from a preference for (social) renting towards a focus on highly financialized homeownership: 81,3% of homeowners in the Netherlands is a mortgaged homeowner. Higher rates of mortgaged homeownership can also be noted for Spain, Portugal, Cyprus, and (to a lesser extent) Malta. Mortgaged homeownership is, furthermore, somewhat more common in Estonia and Slovakia, traditionally belonging to the 'super-outright-homeownership' countries of Eastern Europe, where many households live in housing passed on from the previous generation(s) (Heidenreich, 2022). In general, however, in all countries *but* the Netherlands, the majority of homeowners (two-thirds on average) does not (or no longer) have a mortgage.

Income inequality patterns (gross income) are in line with established findings. The lowest levels are found in the Czech Republic and most other Central- and Eastern-European countries, but also in Austria. Levels of income inequality are much higher in the more liberal Baltic states. Southern-European countries display higher levels of income inequality compared to North-Western-European countries. The level of gross income inequality in the Netherlands seems rather high, but is more or less in line with results reported elsewhere (e.g. Afnan, 2020; CBS, 2024; Solt, 2020). As the level of redistribution in the Netherlands is comparatively high, disposable household income inequality (not available in HFCS) is generally lower, and among the lowest in Europe (CBS, 2024).

Table 1. Homeownership, income inequality, and wealth inequality across Europe (HFCS, 2021, household level, weighted results)

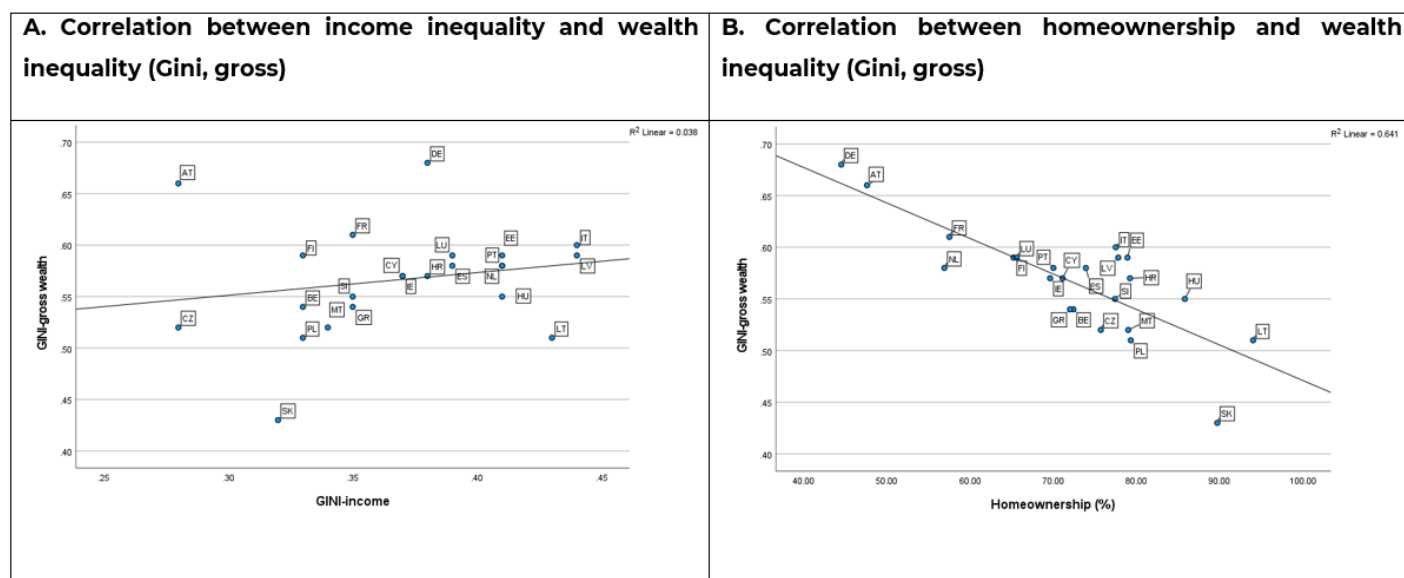
Housing-welfare regime	Home-ownership (%)	Mortgaged home-ownership (%)	Gini-income	S80/S20-income	Gini-gross wealth	Gini-net wealth	S80/S20-gross wealth*	S80/S20-net wealth*
NL	56.9	46.2	0.41	12.5	0.58	0.67	2.9	2.9
AT	47.6	12.8	0.28	4.3	0.66	0.67	3.5	3.4
DE	44.5	15.7	0.38	7.8	0.68	0.70	6.3	6.0
FR	57.5	22.1	0.35	6.2	0.61	0.64	6.8	6.7
BE	72.4	32.8	0.33	5.3	0.54	0.59	3.4	3.3
FI	65.2	30.9	0.33	5.1	0.59	0.65	5.4	4.9
IE	69.6	30.4	0.37	6.3	0.57	0.63	2.8	2.4
LU	65.6	27.2	0.39	8.2	0.59	0.63	5.4	5.8
CY	71.1	27.4	0.37	7.1	0.57	0.62	4.2	4.5
ES	73.9	28.4	0.39	7.7	0.58	0.63	5.1	5.1
GR	72.0	8.2	0.35	7.1	0.54	0.55	2.6	2.7
IT	77.5	12.4	0.44	10.4	0.60	0.62	6.7	6.5
MT	79.0	18.6	0.34	5.9	0.52	0.53	2.2	2.0
PT	70.0	30.5	0.41	8.5	0.58	0.62	3.3	3.3
<i>Baltics</i>								
EE	78.9	23.0	0.41	8.6	0.59	0.61	2.9	2.5
LV	77.8	9.6	0.44	10.4	0.59	0.61	4.1	3.7
LT	94.0	9.0	0.43	10.6	0.51	0.52	2.4	2.3
CZ	75.7	11.8	0.28	4.0	0.52	0.55	2.6	2.5
HR	79.2	6.0	0.38	8.8	0.57	0.58	1.8	1.8
HU	85.8	15.2	0.41	9.6	0.55	0.57	3.5	3.5
PL (2016)	79.3	13.3	0.33	5.5	0.51	0.52	2.7	2.5
SI	77.4	9.1	0.35	7.0	0.55	0.57	2.3	2.2
SK	89.7	24.4	0.32	5.1	0.43	0.45	2.5	2.3

* Across the income distribution.

Consistent with previous research (e.g. Causa & Woloszko, 2020; Keister & Moller, 2000; Skopek et al., 2015), but here pertaining to a wider sample of countries, in the fourth wave of HFCS (2021) wealth inequality is higher than (gross) income inequality, but not in any systematic way related to income inequality ($R=0.20$, $p<0.37$) (Figure 1A). As opposed to (earned) income, wealth is a stock measure that represents resources accumulated over longer periods of time, and that includes wealth transferred from previous generations. Wealth inequality is highest in the countries with unitary rental markets and/or a welfare state that is more strongly characterized by social-democratic universalistic redistribution (also see Heidenreich, 2022; Skopek et al., 2015), intermediate in the other Western- and Southern-European countries and the Baltics, and generally lower in Central- and Eastern-Europe. There is, furthermore, a negative and statistically significant correlation between the homeownership rate and the level of total gross and net wealth inequality (calculated across the total wealth distribution, $R=-0.80$ and $R=-0.83$, $p<0.001$) (Figure 1B for gross wealth inequality). The correlations between the homeownership rate and the

ratio of gross and net wealth between the top and bottom income quintile (comparing richer to poorer households) are somewhat smaller ($R=-0.50$ for both wealth measures), but still moderately strong and significant at the $p<0.05$ -level. Similar to Kaas et al. (2019) for nine Western-European countries and Brezinski and Salah (2021, p. 1) for five Central- and Eastern-European countries, we find for this wider sample of 23 countries, that “*the single most important factor accounting for wealth inequality disparities [...] is homeownership*”.

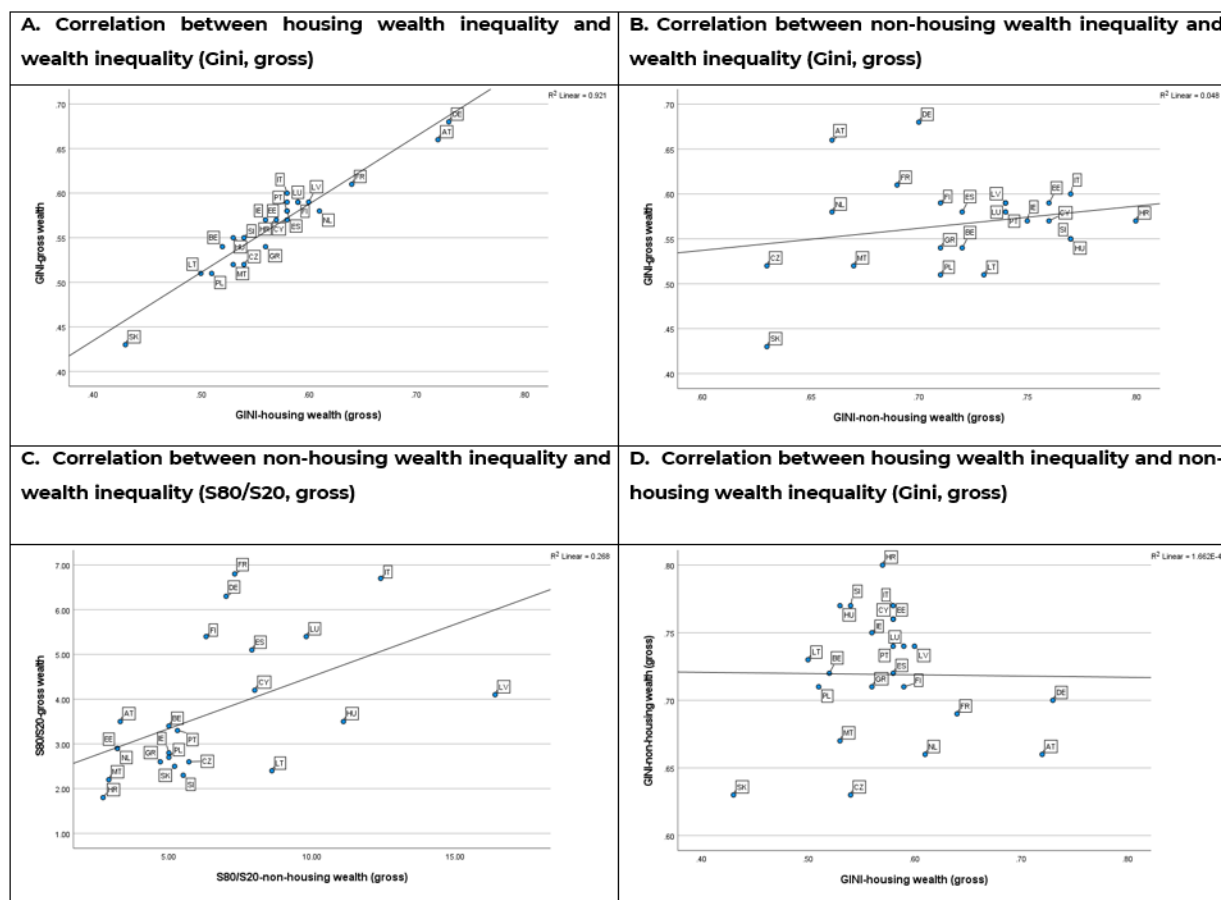
Figure 1. Stylized relationships between homeownership, income inequality and wealth inequality (HFCS, 2021, household level, weighted results)



Obviously, the strong negative relationship between the homeownership rate and relative wealth inequality, is due to the simple fact that – as housing wealth is for most households the most important wealth component across most European countries (see Table 3) – housing wealth inequality is the central driver of cross-national differences in wealth inequality ($R=0.96$; $p<0.001$, Figure 2A) (also see Pfeffer & Waitkus, 2021). None of the correlations between the wealth-based Gini of non-housing wealth inequality and total wealth inequality reaches statistical significance (see Figure 2B for gross (housing) wealth). The picture is different when looking at the summary measures of non-housing and total wealth inequality across the income distribution (Figure 2C), for which we note a

moderate positive correlation ($R=0.518$, $p<0.05$ for gross (housing) wealth and $R=0.547$, $p<0.01$ for net (housing) wealth). **Nevertheless, cross-national differences in housing wealth inequality, rather than non-housing wealth inequality, are the central driver of comparative differences in overall wealth inequality.** For both types of summary inequality measures (the wealth-based Gini and the S80/S20-ratio comparing rich and poor households), there is furthermore no correlation between the level of housing wealth inequality and the level of non-housing wealth inequality (see Figure 2D for the gross wealth-based Gini). **In terms of relative inequality, housing wealth and non-housing wealth are no communicating vessels: higher relative inequality in housing wealth is not compensated for by higher equality of non-housing wealth.**

Figure 2. Stylized relationships between wealth inequality, housing wealth inequality and non-housing wealth inequality (HFCS, 2021, household level, weighted results)



In Table 2, we further unpack these aggregate associations by exploring the distribution of housing and non-housing wealth inequality across housing-welfare regimes. Two main findings immediately come to one's attention, both related to the rather unique position of the housing-welfare regimes with a unitary rental market. First, housing wealth inequality indeed tends to be rather higher in this group compared with all other country groups. This is in line with the general empirical finding that in countries with a larger (social) rental sector, more moderately high- to high-income households select into homeownership, whilst more moderately-low and low-income households select into renting. High levels of housing wealth inequality based on the wealth distribution are also partly a statistical artefact arising from the fact that renters typically do not own any housing wealth at all – in Austria and Germany less than 50% of

households is an owner-occupier; the median level of gross housing wealth in Germany is 0 in all waves. Vice versa, the more homeownership becomes the dominant tenure for all, the more equally housing wealth is spread throughout the wealth and income distribution., reflecting the commonly-known finding that for most low-to-moderate income Second, apart from the housing-welfare regimes with a unitary rental market, non-housing wealth is (much) less equally distributed than housing wealth households, housing wealth is the only significant form of wealth (e.g. Killewald et al., 2017; König et al., 2020). Though non-housing wealth inequality tends to be lower in the unitary rental market countries compared with non-housing wealth inequality the other country groups, in comparison with housing wealth inequality, non-housing wealth is, at best, “equally unequally” distributed. Removing the unitary rental market-countries does not substantially affect the above-reported macro-level correlations between homeownership/housing wealth inequality and total wealth inequalities.

Table 2. Inequality of housing and non-housing wealth (HFCS, 2021, household level, weighted results)

Housing-welfare regime	Gini-housing wealth (gross)	S80/S20-housing wealth (gross)*	Gini-housing wealth (net)	S80/S20-housing wealth (net)*	Gini-non-housing wealth (gross)	S80/S20-non-housing wealth (gross)*	Gini-non-housing wealth (net)	S80/S20-non-housing wealth (net)*
<i>Social-democratic unitary rental market-countries</i>								
NL	0.61	2.7	0.72	2.5	0.66	3.2	0.74	3.7
<i>Conservative-corporatist unitary rental market-countries</i>								
AT	0.72	4.1	0.73	3.9	0.66	3.3	0.70	3.3
DE	0.73	5.6	0.76	5.1	0.70	7.0	0.73	7.3
FR	0.64	6.4	0.68	6.0	0.69	7.3	0.72	7.7
<i>NWE homeownership countries - dual rental market</i>								
BE	0.52	2.8	0.57	2.6	0.72	5.0	0.75	5.2
FI	0.59	5.0	0.64	4.1	0.71	6.3	0.87	6.5
IE	0.56	2.3	0.63	1.8	0.75	5.0	0.80	5.1
LU	0.59	4.3	0.63	4.4	0.74	9.8	0.77	11.1
<i>SE family-based homeownership countries</i>								
CY	0.58	3.6	0.63	3.8	0.76	8.0	0.89	8.8
ES	0.58	4.2	0.64	4.0	0.72	7.9	0.78	8.6
GR	0.56	2.3	0.58	2.3	0.71	4.7	0.76	5.0
IT	0.58	4.7	0.60	4.4	0.77	12.4	0.79	12.7
MT	0.53	2.1	0.55	1.9	0.67	2.9	0.72	2.7
PT	0.58	2.7	0.62	2.6	0.74	5.3	0.78	5.3
<i>Baltics</i>								
EE	0.58	2.8	0.59	2.3	0.76	3.2	0.81	3.3
LV	0.60	3.0	0.61	2.6	0.74	16.4	0.81	16.5
LT	0.50	2.0	0.53	1.9	0.73	8.6	0.76	9.2
<i>CEE-countries</i>								
CZ	0.54	2.1	0.56	2.0	0.63	5.7	0.75	6.3
HR	0.57	1.7	0.58	1.6	0.80	2.7	0.87	2.6
HU	0.53	2.4	0.54	2.3	0.77	11.1	0.80	11.2
PL (2016)	0.51	2.3	0.53	2.0	0.71	5.0	0.73	5.1
SI	0.54	1.9	0.55	1.8	0.77	5.5	0.84	5.3
SK	0.43	2.1	0.46	1.9	0.63	5.2	0.66	5.3

* Across the income distribution.

Table 3. Homeownership rate and housing wealth as % of total wealth (gross) across income tertiles (HFCS, 2021, household level, weighted results)

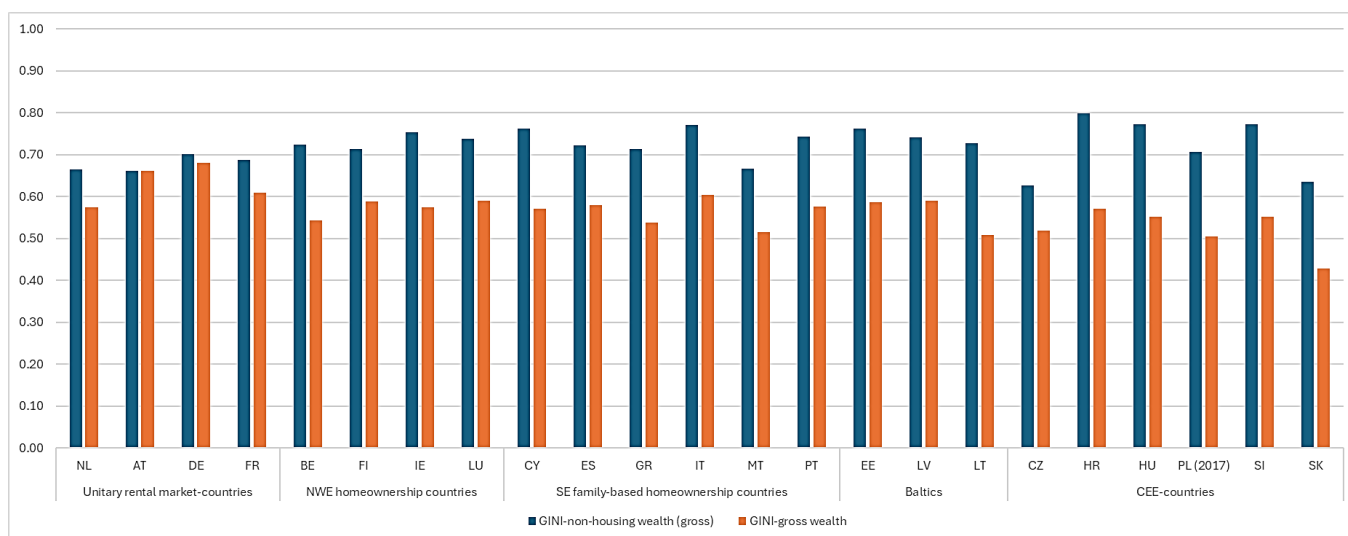
Housing-welfare regime	Homeownership rate			Housing wealth as % of total wealth		
	Bottom income tertile	Middle income tertile	Top income tertile	Bottom income tertile	Middle income tertile	Top income tertile
<i>Social-democratic unitary rental market-countries</i>						
NL	38.7	59.5	72.6	34.0	50.2	58.9
<i>Conservative-corporatist unitary rental market-countries</i>						
AT	34.3	50.2	58.3	32.8	43.1	48.3
DE	27.2	45.7	60.8	27.8	37.7	46.4
FR	33.5	58.5	80.4	29.7	47.6	60.1
<i>NWE homeownership countries - dual rental market</i>						
BE	55.6	73.4	88.2	48.7	59.3	65.4
FI	42.1	68.7	84.9	37.7	56.4	64.2
IE	56.3	67.2	85.2	51.2	53.8	66.0
LU	53.2	67.9	75.8	52.6	62.3	65.8
<i>SE family-based homeownership countries</i>						
CY	56.9	77.6	78.7	61.0	73.2	71.4
ES	61.6	77.0	83.2	60.1	67.1	66.4
GR	68.8	72.1	75.0	66.5	64.6	63.1
IT	64.3	79.1	89.1	59.1	64.0	63.3
MT	66.8	75.9	94.3	60.3	69.0	77.7
PT	61.4	67.4	81.3	60.9	59.3	64.7
<i>Baltics</i>						
EE	69.7	82.0	85.0	61.8	66.8	68.1
LV	69.1	81.4	83.0	69.0	70.8	67.6
LT	96.4	93.1	92.3	90.0	81.5	76.8
<i>CEE-countries</i>						
CZ	67.2	77.0	83.0	65.4	67.9	69.0
HR	82.0	76.7	78.9	79.8	72.8	73.8
HU	84.3	86.5	86.7	80.4	71.5	62.8
PL (2016)	72.2	81.5	84.2	71.2	69.8	67.8
SI	73.2	77.0	82.0	71.3	67.8	69.1
SK	84.6	91.2	93.4	79.8	77.2	76.8

Given the very similar outcomes and patterns when using net vs. gross housing wealth, in the remainder of this section we only report results pertaining to gross housing wealth. In Table 3 we report the relative importance of housing wealth in the total wealth portfolio, as well as the homeownership rate, across income tertiles. In all European countries under consideration, bar Croatia, homeownership rates are higher for subsequently richer income tertiles. The income gradient in homeownership is however much more outspoken in the unitary rental market-countries: notwithstanding higher

levels of ‘tenure neutrality’¹ nearly two-thirds of low-income households and half of middle-income households select into renting, with conversely, much higher levels of homeownership amongst high-income household. This contributes to explaining the high levels of relative housing wealth inequality for this group of countries reported in Table 2. In unitary rental market-countries, furthermore, gross housing wealth does not quite represent 50% of gross total wealth (all households). As we move through the table from Northern- to Southern-Europe, and from Western- to Eastern-Europe, homeownership is increasingly more common amongst moderate- and low-income households, which is reflected in an increasing importance of housing wealth as a proportion of total wealth: on average around 70% across countries and income tertiles for Southern- and Eastern-Europe combined. Given that housing wealth is more equally distributed than non-housing wealth, and given that in countries with higher homeownership rates, housing wealth constitutes a (much) larger component of total wealth across all income groups, the proportional reduction in wealth inequality ‘before and after housing wealth’ for different summary measures is largest in the ‘super-homeownership’ housing-welfare regimes of Eastern-Europe (including the Baltic states), and somewhat lower in Southern-Europe and in the NWE-countries with a dual rental market. The (relative) inequality-reducing impact of housing wealth in the countries with a unitary rental market is far more limited and non-existent in Austria (see Figure 3 for the wealth-based Gini).

¹ As both owning and renting are supported and of reasonable quality, households across the income distribution theoretically have more choice whether to own or rent.

Figure 3. Reduction in relative wealth inequality ‘before and after housing wealth’ (gross, wealth-based Gini) (HFCS, 2021, household level, weighted results)



In Table 4, we move away from the population-wide inequality distribution, and explore levels of relative gross wealth inequality and concentration *within* the subsamples of homeowners and renters (measurement of tenure status is based on the Household Main Residence). Also within the sample of homeowners, non-housing wealth is far more unequally distributed than housing wealth (wealth-based Gini of 0.69 on average across all countries vs. 0.43 on average for housing wealth), indicating that lower-wealth or lower-income homeowners likely own significantly smaller amounts of non-housing wealth in comparison with richer home-owner households. Non-housing wealth tends to be even more unequally distributed, however, across the subsample of renters (wealth-based Gini of 0.74 on average). Differences between housing-welfare regimes are less evident when abstracting from the tenure structure of countries in this way. Inequality of non-housing wealth nevertheless does tend to be lower in the countries with a unitary rental market (though not based on the S80/S20-ratio comparing rich to poor households for the subsample homeowners), higher in Southern-Europe, and highest in the Baltic States. Patterns of non-housing wealth inequality are rather mixed in Central- and Eastern-Europe, with high levels of inequality in some countries (e.g. Hungary, Croatia) and lower levels of inequality in other countries (e.g. Slovakia).

Within the subsample of homeowners, levels of wealth inequality and concentration of housing wealth vary across European countries in a way that is *not* systematically related to the homeownership rate ($p > 0.05$ for both measures). Gross housing wealth seems to be somewhat more unequally distributed in the conservative-corporatist countries with a unitary rental market, and again across Southern-European countries and the Baltic states. Again, countries belonging to the CEE-cluster are more of a mixed bunch, with lower (e.g. Slovakia) and higher (e.g. Hungary, Croatia) levels of gross housing wealth inequality. At the country-level and for home-owners, there is a moderate, positive and significant association between the wealth-based Gini of gross housing wealth and gross non-housing wealth ($R = 0.57$, $p < 0.001$). The wealth-based Gini of gross non-housing wealth for owners is furthermore positively correlated with the wealth-based Gini of gross non-housing wealth for renters ($R = 0.57$, $p < 0.001$) (see Figure 4). ***This indicates the extent to which comparative differences in wealth inequality are also driven by other institutional arrangements than tenure structures and housing provision systems.***

Figure 4. Country-level associations abstracting from tenure structures (gross, wealth-based Gini) (HFCS, 2021, household level, weighted results)

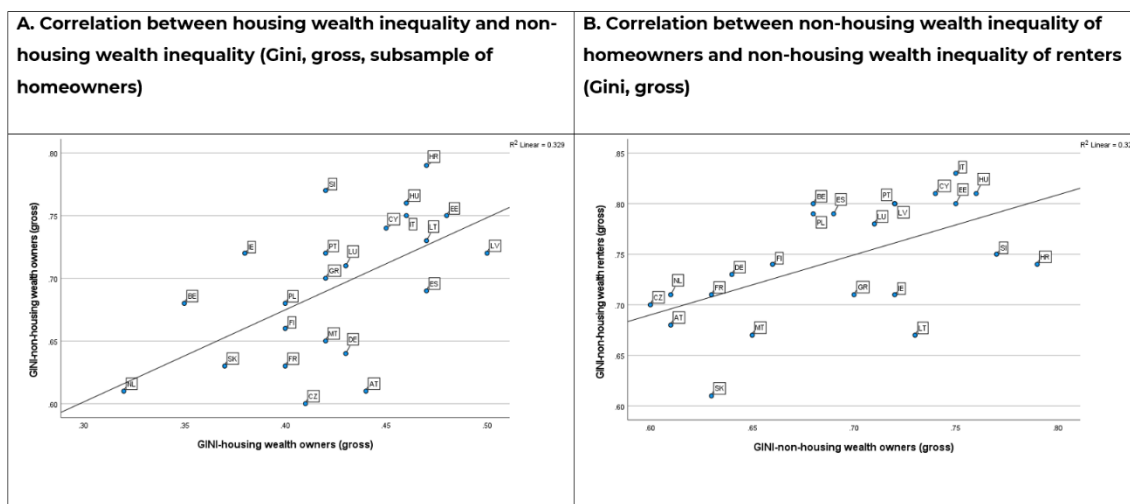


Table 4. Inequality of gross housing and non-housing wealth within subsamples of owners and renters (HFCS, 2021, household level, weighted results)

	Owners				Renters	
Housing-welfare regime	Gini-housing wealth (gross)	S80/S20-housing wealth (gross)*	Gini-non-housing wealth (gross)	S80/S20-non-housing wealth (gross)*	Gini-non-housing wealth (gross)	S80/S20-non-housing wealth (gross)*
<i>Social-democratic unitary rental market-countries</i>						
NL	0.32	2.7	0.61	4.0	0.71	1.6
<i>Conservative-corporatist unitary rental market-countries</i>						
AT	0.44	4.0	0.61	3.6	0.68	2.7
DE	0.43	5.5	0.64	10.0	0.73	3.7
FR	0.40	6.5	0.63	11.1	0.71	2.1
<i>NWE homeownership countries - dual rental market</i>						
BE	0.35	2.8	0.68	5.6	0.80	2.0
FI	0.40	5.1	0.66	8.2	0.74	1.4
IE	0.38	2.3	0.72	5.5	0.71	1.7
LU	0.43	4.3	0.71	12.1	0.78	4.7
<i>SE family-based homeownership countries</i>						
CY	0.45	3.3	0.74	8.6	0.81	5.9
ES	0.47	4.1	0.69	8.7	0.79	5.4
GR	0.42	2.2	0.70	4.9	0.71	4.1
IT	0.46	4.6	0.75	14.9	0.83	4.5
MT	0.42	2.1	0.65	3.6	0.67	0.2
PT	0.42	2.6	0.72	5.2	0.80	5.7
<i>Baltics</i>						
EE	0.48	2.9	0.75	4.6	0.80	0.7
LV	0.50	2.9	0.72	16.9	0.80	12.7
LT	0.47	2.0	0.73	8.4	0.67	15.2
<i>CEE-countries</i>						
CZ	0.41	2.1	0.60	6.0	0.70	4.6
HR	0.47	1.7	0.79	2.7	0.74	4.2
HU	0.46	2.3	0.76	11.5	0.81	8.3
PL (2016)	0.40	2.2	0.68	5.0	0.79	5.5
SI	0.42	1.8	0.77	6.3	0.75	2.1
SK	0.37	2.1	0.63	5.7	0.61	1.4

* Across the income distribution.

To summarize, in this section we mainly focused on relationships between homeownership, housing wealth inequality and total wealth inequality. In line with a limited body of prior research and for a much wider sample of 23 countries belonging to different housing-welfare regimes (as well as using different operationalizations better suited to the evaluation of housing wealth), we find that in the last wave of HFCS (2021), a country-level negative association between homeownership rates/housing wealth inequality and total wealth inequality can be established: to the extent that specifically lower-wealth/income households are able to accumulate housing wealth, the overall level of wealth inequality tends to be lower. This association comes about through different mechanisms, such as the higher preponderance of housing wealth in the wealth portfolio of lower-income households as we move from North to South and from West to East,

combined with the fact that non-housing wealth tends to be more unequally distributed than housing wealth. The rather unique position of unitary rental market-countries indicates that (historical) housing policies play an important role in modifying this relationship. Relative inequalities, however, do not reveal much information regarding *absolute* levels of housing and non-housing wealth. In the next section, we turn to investigating qualitative differences between housing-welfare regimes from this different angle.

4.2 Absolute levels of (housing) wealth

Table 5 reports annual median income and total (gross) wealth levels for all households (2021-prices), as well as for owners and renters separately. We also report the wealth rate, defined as the ratio of median wealth to median household income (e.g. Skopek et al., 2015). Even without adjustments for differences in purchasing power, it is clear that household incomes and total wealth-levels are higher in Western-Europe, intermediate in Southern-Europe and comparatively low in Eastern-Europe. Southern-European countries (bar Greece) tend to have comparatively lower households' incomes, but comparatively higher wealth levels, which translates into relatively higher wealth rates. Seemingly lower wealth rates in unitary rental-market countries are explained by differences in the tenure structure, i.e. lower homeownership rates. On average, the gross wealth owned by European households amounts to 5.4 times the annual household income.

In nearly all countries, renters have lower median household incomes than owners. Differences in terms of annual household income between owners and renters are smaller in Eastern-Europe, given higher rates of (lower-income) homeownership. The average tenure wealth gap across Europe, defined as median gross wealth of owners divided by median gross wealth of renters, amounts to 25.1 (and ranges from 16.5 in Austria to 38.0 in Ireland): owners own far more wealth than renters (Figure 5A). ***The tenure wealth gap is lower in countries with a unitary rental market, where renter-households comparatively own higher levels of wealth. It is also smaller in Eastern-Europe, but this is explained by comparatively lower wealth levels of homeowners. In general, across all European countries, the wealth rate of renters is very low:*** median

total gross wealth of renters not even amounts to half (42.4%) of the gross annual household income of renters.

Figure 5. Tenure wealth gap gross total wealth and non-housing wealth (HFCS, 2021, household level, weighted results)

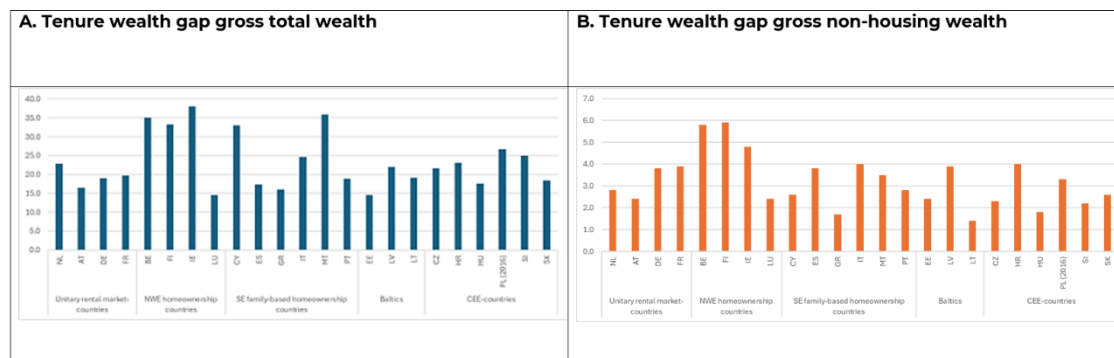


Table 6 looks into median levels of gross housing and non-housing wealth. On average, homeowners own about three times more non-housing wealth than renters (who do not own housing wealth either). With the exception of Luxembourg, where the median renter is particularly rich, **across European countries the level of non-housing wealth owned by renters is so low that, for most and based on these resources alone, obtaining a mortgage/entering homeownership is ‘mission impossible’**. Levels of housing and non-housing wealth are lowest in Eastern-Europe and also Portugal and Greece, and highest in Western-Europe. The Southern-European countries take an intermediate position. Finally, both tenure wealth gaps (total wealth and non-housing wealth) are highest in the NWE-countries with a dual rental market, who traditionally favoured homeownership above renting: Belgium, Finland, and Ireland. Luxembourg also belongs to this housing-welfare regimes, but in Luxembourg also renters are comparatively rich, resulting in smaller tenure wealth gaps (see Figure 5B).

Table 5. Absolute levels of (gross) household income and (gross) wealth (€, 2021-prices) (HFCS, 2021, household level, weighted results, equivalized)

Housing-welfare regime	Median income			Median wealth			Wealth rate (median wealth/median income)		
	All	Owners	Renters	All	Owners	Renters	All	Owners	Renters
<i>Social-democratic unitary rental market-countries</i>									
NL	31867	38500	24681	146429	251333	11025	4.6	6.5	0.45
<i>Conservative-corporatist unitary rental market-countries</i>									
AT	30012	32774	26937	90300	239667	14500	3.0	7.3	0.54
DE	32567	39356	27250	90800	281000	14816	2.8	7.1	0.54
FR	22199	26633	17363	121547	215303	10914	5.5	8.1	0.63
<i>NWE homeownership countries - dual rental market</i>									
BE	31970	36593	23883	207633	267191	7640	6.5	7.3	0.32
FI	30948	35971	21516	113901	178194	5372	3.7	5.0	0.25
IE	32256	36659	24576	165024	239680	6302	5.1	6.5	0.26
LU	60000	63760	48000	543333	751852	51600	9.1	11.8	1.08
<i>SE family-based homeownership countries</i>									
CY	15600	17000	11767	134221	181434	5500	8.6	10.7	0.47
ES	17321	19108	13014	106141	141789	8208	6.1	7.4	0.63
GR	12231	12514	11449	55711	76667	4800	4.6	6.1	0.42
IT	19365	21280	13389	115499	152701	6197	6.0	7.2	0.46
MT	18618	19995	12894	199278	242247	6767	10.7	12.1	0.52
PT	12359	13574	10637	79014	107026	5673	6.4	7.9	0.53
<i>Baltics</i>									
EE	14851	16066	10385	53757	69379	4765	3.6	4.3	0.46
LV	9200	9572	7297	25203	33521	1522	2.7	3.5	0.21
LT	11041	10796	14732	44337	48440	2542	4.0	4.5	0.17
<i>CEE-countries</i>									
CZ	12104	12751	10397	66835	84148	3899	5.5	6.6	0.38
HR	9460	9269	10279	44928	56344	*2455	4.7	6.1	0.24
HU	8411	8492	7910	42136	48290	2748	5.0	5.7	0.35
PL (2016)	8637	8943	7276	44202	53421	2011	5.1	6.0	0.28
SI	15492	16000	14276	78123	102104	4076	5.0	6.4	0.29
SK	10766	11024	8304	63531	68875	3750	5.9	6.2	0.45

* mean value instead of median value.

Table 6. Absolute levels of gross housing wealth and non-housing wealth (€, 2021-prices) (HFCS, 2021, household level, weighted results, equivalized)

Housing-welfare regime	Median housing wealth	Median non-housing wealth		Tenure wealth gap non-housing wealth
	Owners	Owners	Renters	
Social-democratic unitary rental market-countries				
NL	200000	30778	10841	2.8
Conservative-corporatist unitary rental market-countries				
AT	200000	32435	13750	2.4
DE	200000	53261	14000	3.8
FR	160325	39421	10157	3.9
NWE homeownership countries - dual rental market				
BE	205000	41434	7196	5.8
FI	134944	28924	4901	5.9
IE	176518	28672	6034	4.8
LU	600000	90435	37000	2.4
SE family-based homeownership countries				
CY	150000	12100	4650	2.6
ES	108874	19462	5073	3.8
GR	60000	6500	3905	1.7
IT	113546	22051	5533	4.0
MT	203000	22300	6395	3.5
PT	84417	13507	4781	2.8
Baltics				
EE	53500	8331	3494	2.4
LV	27547	3788	978	3.9
LT	42360	3177	2224	1.4
CEE-countries				
CZ	72704	8111	3509	2.3
HR	51250	2720	683	4.0
HU	39258	4275	2364	1.8
PL (2016)	43083	6039	1830	3.3
SI	83581	8056	3667	2.2
SK	60000	7500	2917	2.6

4.3 Concentration of housing wealth across the income distribution

In this final section, we zoom in on the joint distribution of income and housing wealth, by investigating the concentration of housing wealth across the income distribution. To assess the concentration of wealth, we calculate the amount of wealth each income quintile (tertile) holds as a share of the sum total of all wealth. We furthermore explore further relevant intersections, by investigating the joint distribution of income and wealth across other distributions, in particular age of the household reference person, and the degree of urbanization. As indicated before, income quintiles/tertiles pertain to equivalized gross household income, and are calculated across the relevant sample selection of households in a country.

Figure 6 show the concentration of (gross) housing wealth, by country, across all households (homeowners and renters), while Figure 7 shows the concentration of (gross) housing wealth, by country, across the subsample of homeowners. Both distributions are almost identical: income quintiles are ‘fixed’ in these graphs, and as the majority of renters does not own any gross housing wealth, they hardly contribute any housing wealth to the total gross housing wealth owned by each income quintile. Put differently, in both graphs the sum of housing wealth in each income quintile is only based on those households within the quintile owning any housing wealth – renters literally ‘fall out’ of the calculations when looking at the distribution of housing wealth in this way.

Figure 6. Concentration of (gross) housing wealth across the income distribution (% all households)

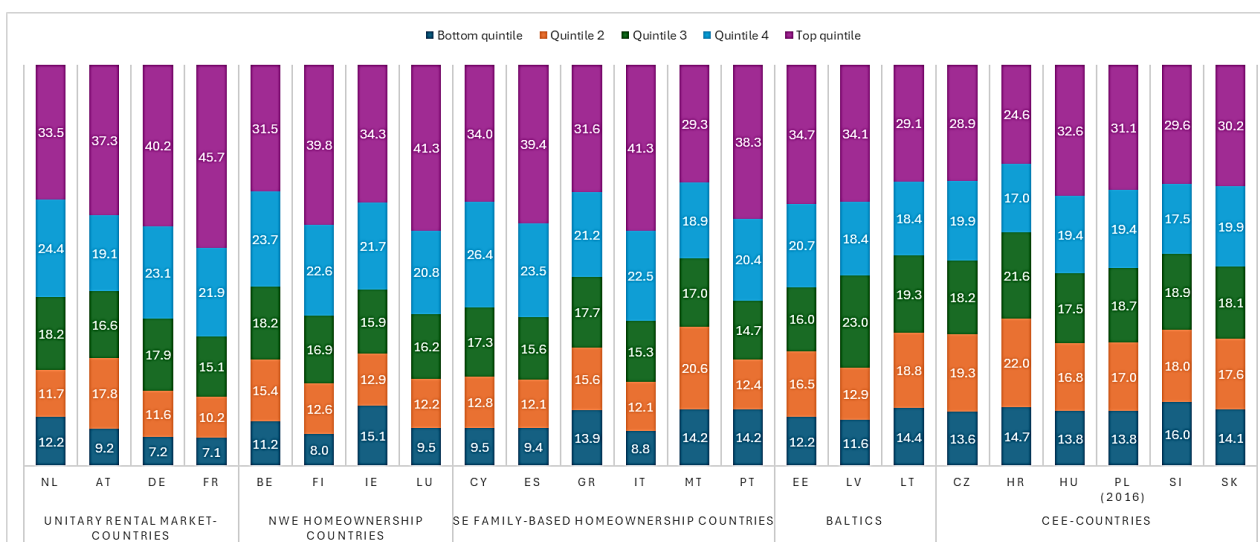
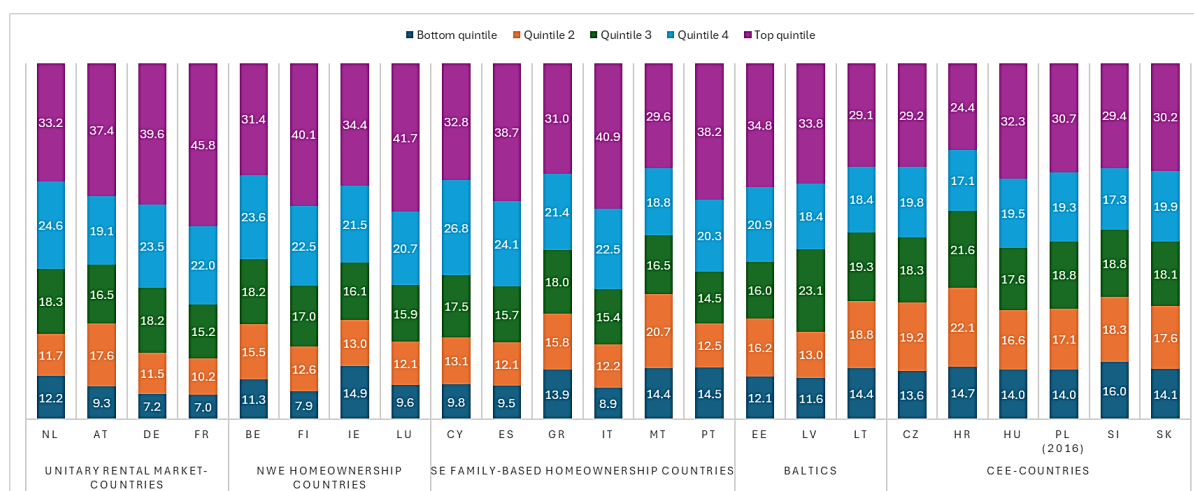
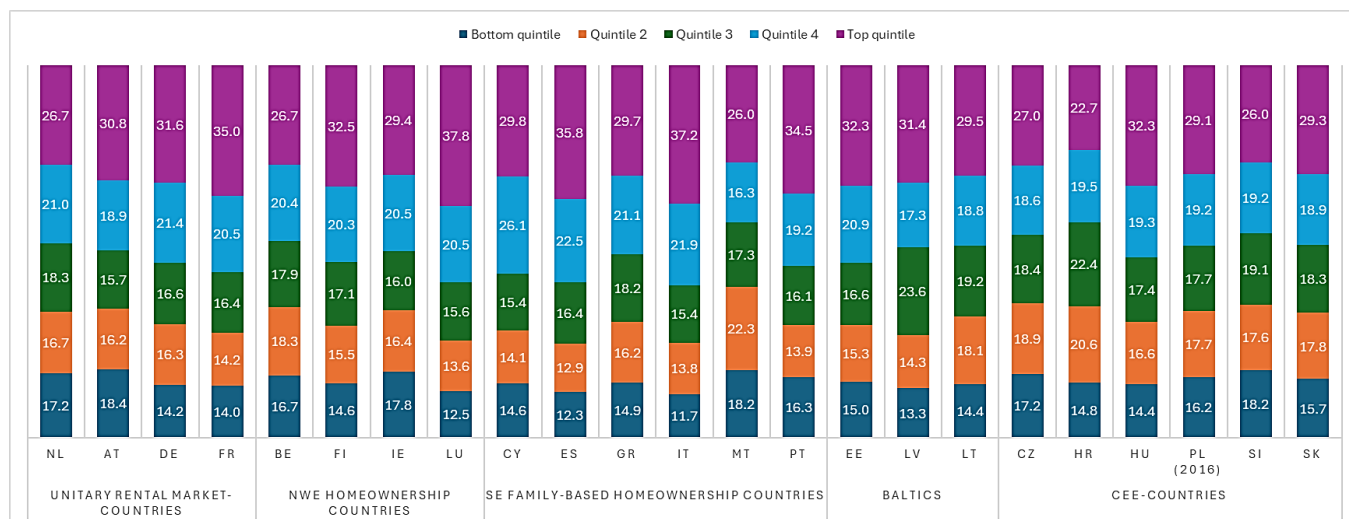


Figure 7. Concentration of (gross) housing wealth across the income distribution (% homeowners)



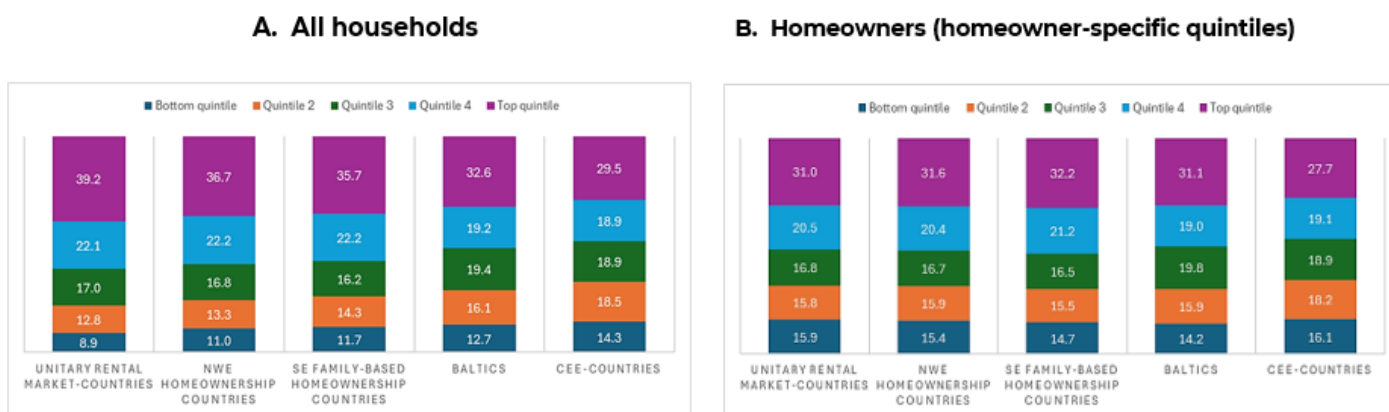
If housing wealth would be equally distributed across the income distribution, then each income quintile would own 20% of housing wealth. An obvious finding is that across European countries, **housing wealth is unequally concentrated across the income distribution**: on average (across all households), the bottom quintile owns 11.9% of total gross housing wealth, whilst the top quintile owns 34.5% of total gross housing wealth. France is the most unequal country in this respect: the two bottom income quintiles together (the 40% lowest incomes) own barely 17.3% of total gross housing wealth, whilst the top income quintile owns 45.7% of total gross housing wealth. The most equal country is Croatia, where the bottom income quintile owns 14.7% of total gross housing wealth and the top income quintile owns 24.6% of total gross housing wealth. Notwithstanding between-country differences within each housing-welfare regime group, averaging results by country-welfare regimes reveals a picture of **decreasing concentration of (gross) housing wealth across the income distribution when we move from North to South, and from West to East** (Figure 8A).

Figure 8. Concentration of (gross) housing wealth across the income distribution (% homeowner-specific income quintiles)



In Figure 8 we look at the concentration of housing wealth across the income distribution, but on the basis of redefined income quintiles based on the sample selection of homeowners only. We note the highest concentration of gross housing wealth in Luxembourg and Italy, followed by France, Finland, Spain, and Portugal. In Luxembourg and Italy, homeowners in the bottom income quintile own somewhat more than 10% of total gross housing wealth, whilst homeowners in the top quintile own almost 40% of total gross housing wealth. Based on Figure 8 and Figure 9B, housing-welfare regimes differences are far less evident, **indicating the extent to which cross-national patterns regarding the concentration of housing wealth are driven by tenure structures**. At the same time, the pattern of results within in each country is also quite similar, indicating that – when moving down through the income distribution – lower-income households are less likely to be homeowners, as well as more likely to own smaller levels of housing wealth, when in homeownership.

Figure 9. Concentration of (gross) housing wealth across the income distribution by housing-welfare regime (%)

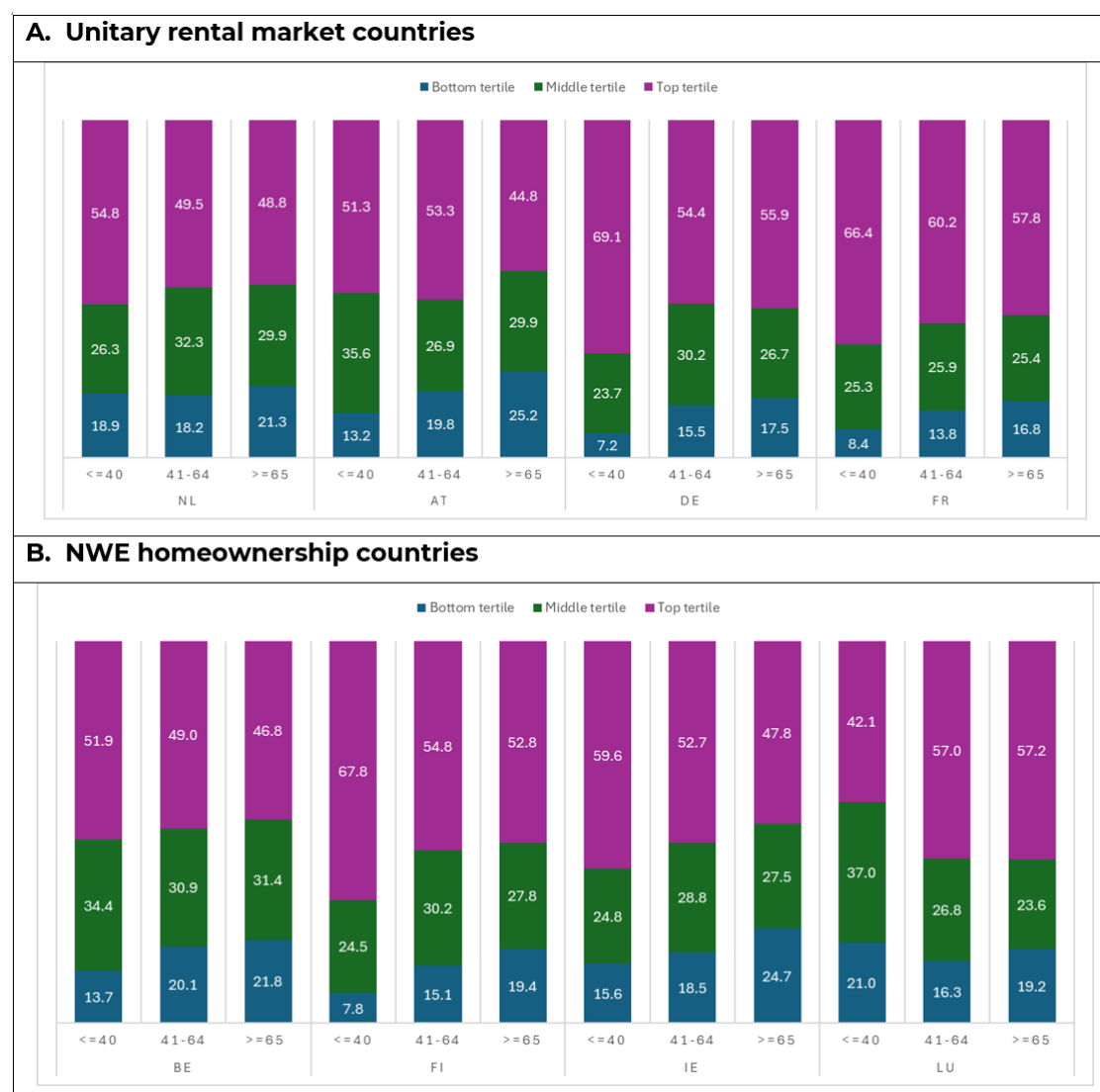


4.3.1 Intersection with age cohort

In this section, we further investigate the joint distribution of income and housing wealth by exploring the concentration of gross housing wealth across income tertiles for different age cohorts based on the age of the household reference person: ≤ 40 years of age; from 41 to 64 years of age; and 65 years or older. In particular respondents belonging to the oldest age cohorts were 30 years or older in 1989, and likely became homeowners when state-socialist regimes across Eastern-Europe were still in place. There is not only an important intersection between household income and homeownership/housing wealth, but also between household income and age cohort: given that income in retirement is generally lower than the income of households in work, the oldest age cohort is over-represented in the bottom income tertile. Across Eastern-European countries, more than 60% of the oldest age cohort belongs to the bottom income tertile. This means that, when using population-defined income tertiles, comparative variation between countries is not only driven by the tenure structure (associated with income), but also by the strong association between the intersection-variable (in this case: age cohort) and income. Therefore, in order to get a clearer view on the concentration of (gross) housing wealth across age cohorts, we present the data/figures for the sample selection of all households

in each age cohort, based on *income tertiles redefined within respective age cohorts*. Within each age cohort, differences in the concentration of housing wealth between age-cohort specific income tertiles are, consequently, driven by housing-market related drivers, in particular variation between age groups in terms of: homeownership rates; levels of gross housing wealth of the main household residence; and multi-property ownership leading to higher levels of gross housing wealth. Though in Figure 10 we present data for each country within the context of the relevant housing-welfare regime, the main focus of this analysis lies with the intersection, *within* each country, between the joint income and housing wealth distribution on the one hand, and age cohort on the other hand.

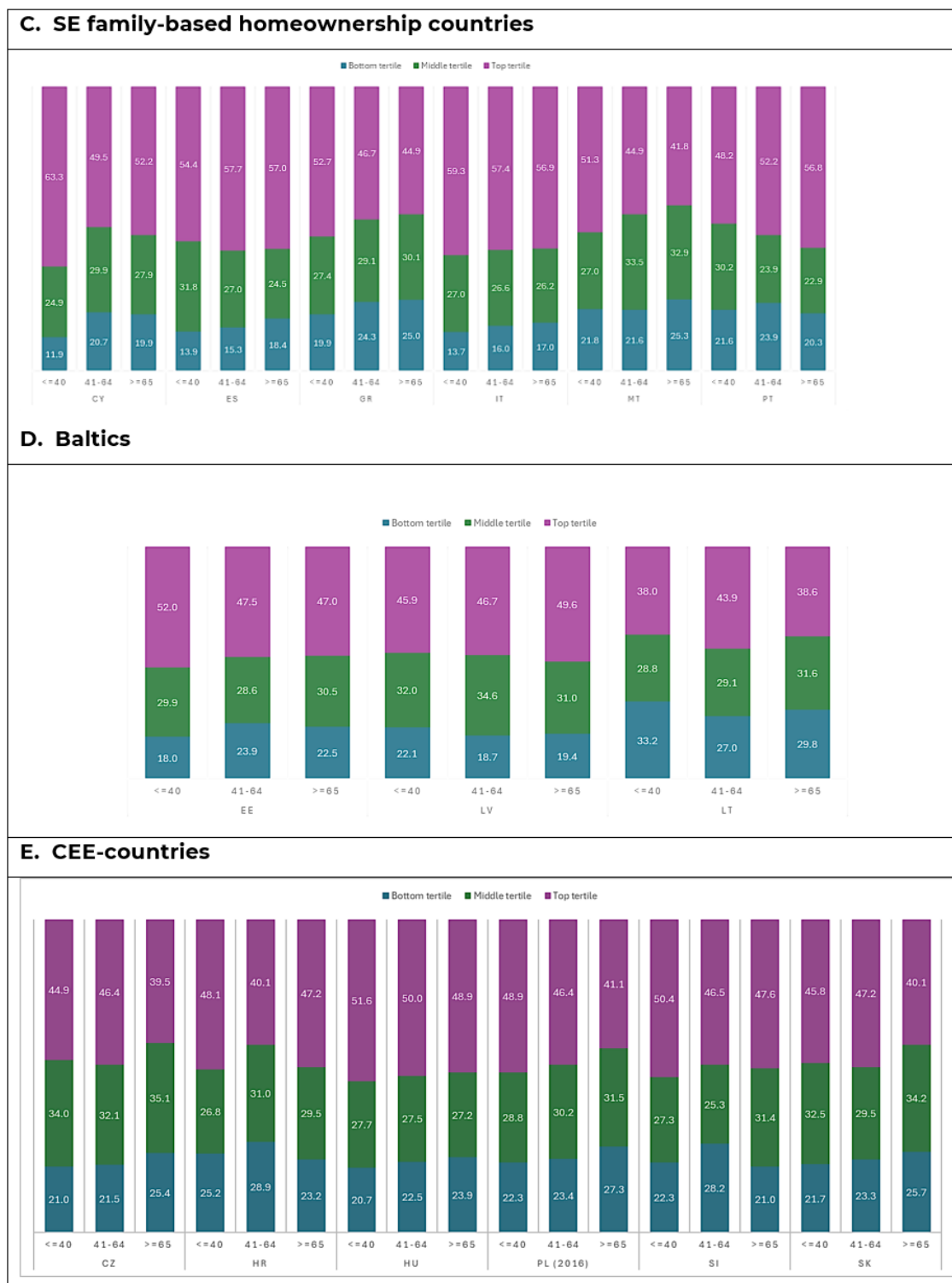
Figure 10. Concentration of (gross) housing wealth across the income distribution by age cohort (% , all households, age cohort-specific income tertiles)



With some exceptions, notably Luxembourg and Portugal, we see that gross housing wealth is more concentrated in each younger each cohort across Western-Europe (Figure 10A, B, 11C). In most countries, this higher wealth concentration comes about by both higher shares of total housing wealth owned by the age cohort-specific top tertile, and lower shares of total housing wealth owned by the age cohort-specific bottom tertile. Across Eastern-Europe (Figure 11D, E), a similar trend is somewhat harder to discern: the picture seems to be one of relative stability across age cohorts (e.g. Latvia), with some variation between countries in terms of a trend towards higher concentration of gross

total housing wealth for the youngest age cohort (e.g. Estonia, Czech Republic, Hungary, Poland, Slovenia). This difference perhaps seems more driven by lower levels of housing wealth owned by the bottom age cohort-specific income tertile as we move from older to younger age cohorts.

Figure 11. Concentration of (gross) housing wealth across the income distribution by age cohort (% , all households, age cohort-specific income tertiles). (continued)



4.3.2 Intersection with degree of urbanization

In this final section, we investigate the joint distribution of income and housing wealth by exploring the concentration of gross housing wealth across income tertiles, defined within degrees of urbanization, available for 16 countries as of wave 4 of HFCS. A distinction is made between densely populated areas (cities/large urban areas); intermediately populated areas (towns and suburbs/small urban areas; and thinly populated areas (rural areas). Similar to the intersection with age cohort, there is a smaller but non-negligible association between household income and degree of urbanization. In some Western-European countries (e.g. Belgium), in the most densely populated areas, *lower*-income households are over-represented. In most Eastern-European countries, *higher*-income households are over-represented in the most densely populated areas. We follow the same strategy as before and define group-specific income tertiles to assess comparative differences within countries in the concentration of gross housing wealth.

Across the North-Western European countries (Figure 12A, B), the concentration of gross housing wealth across income tertiles clearly increases with the degree of urbanization, and this pattern is driven by differences at both ends of the income distribution. Compared with thinly populated areas, in densely populated areas higher-income households own a larger share of total housing wealth, whilst lower-income households own a smaller share of total housing wealth. In the Southern-European countries for which this variable is available in the data (Figure 13C), a similar but less intense difference in the concentration of housing wealth comes about by the comparative smaller housing wealth holdings of lower-income households with an increasing degree of urbanization. Again, it is much harder to discern a similar pattern across Eastern-European countries (Figure 13D, E). In the Baltic states there is no clear pattern. The same goes for the Central-and-East-European countries: only in Slovenia we see a clear increase in concentration of housing wealth across income tertiles with an increasing degree of urbanization. In Slovakia, however, the opposite is true.

Figure 12. Concentration of (gross) housing wealth across the income distribution by degree of urbanization (% , all households, group-specific income tertiles)

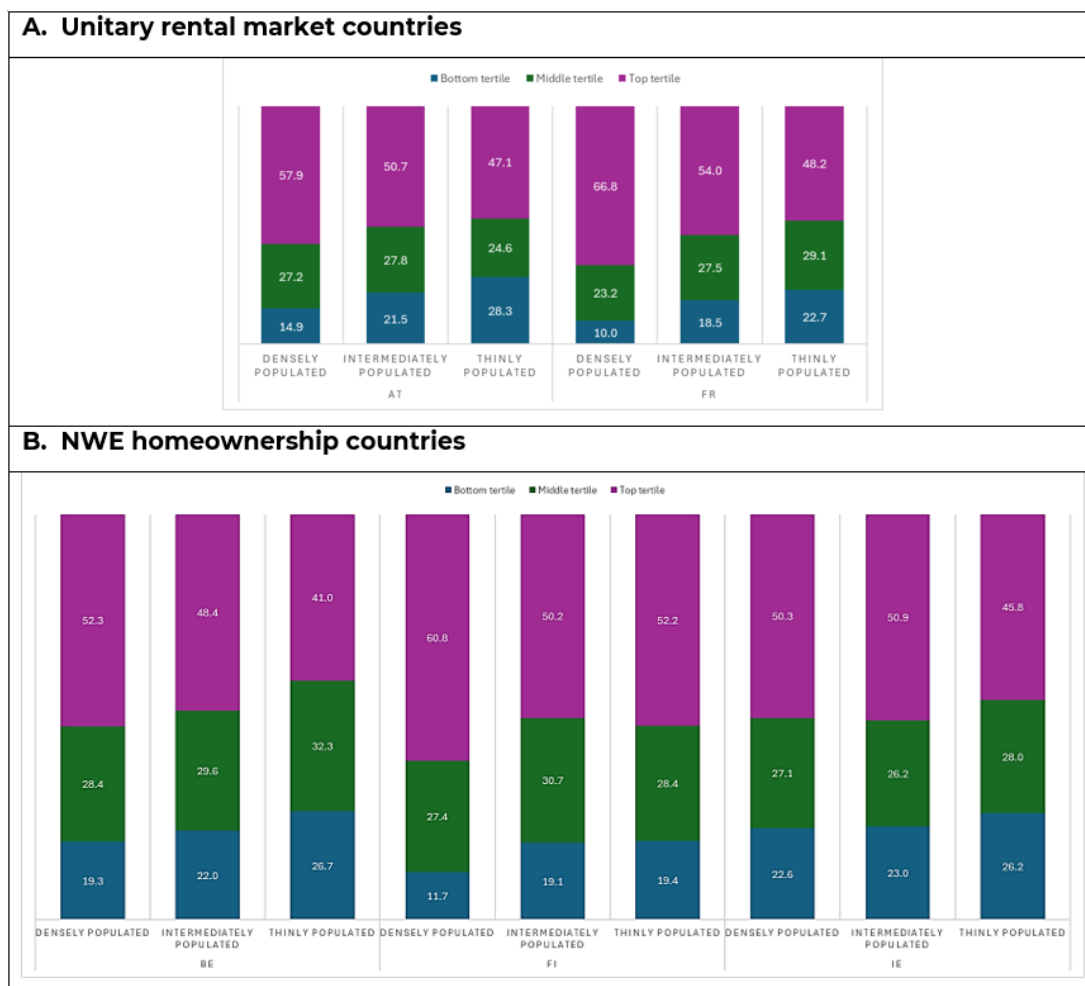
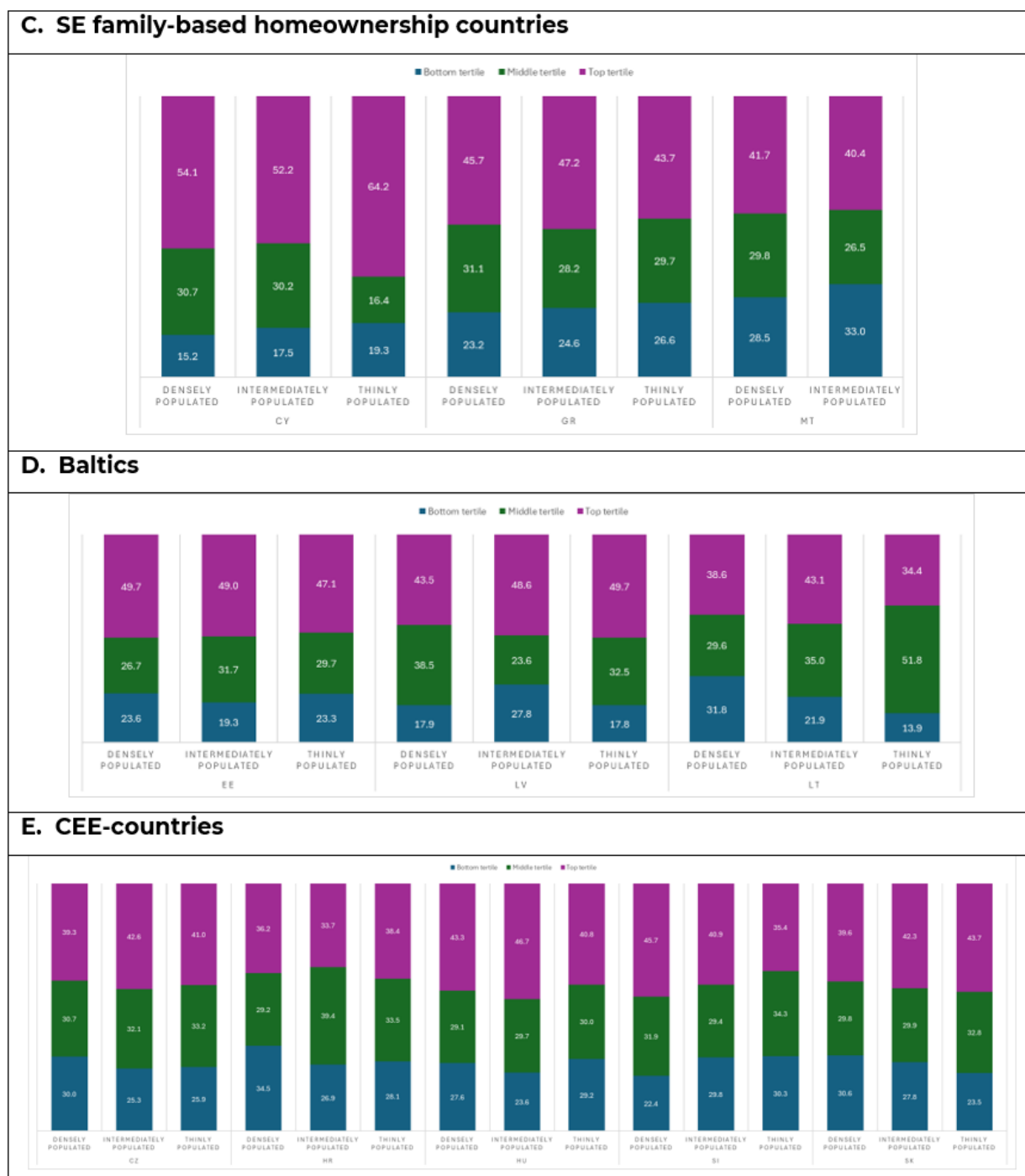


Figure 13. Concentration of (gross) housing wealth across the income distribution by degree of urbanization (% , all households, group-specific income tertiles)



5. Conclusions

Notwithstanding the often-stated importance of housing wealth in the wealth portfolio of households across the enlarged EU, wealth inequality research has only recently started to analyse relationships between, in particular, homeownership rates and/or *relative* (net) housing wealth inequality on the one hand, and *relative* (net) total wealth inequality on the other hand. Most of these more econometric papers have analysed/decomposed so-called summary inequality measures, in particular the Gini-coefficient. Based on country-samples of varying sizes, these studies report a strong and statistically significant negative relationship: the higher the homeownership rate, the lower the level of relative (net) total wealth inequality. Put differently, comparative differences in relative wealth inequality are centrally driven by the tenure structure, and by associated relative differences in terms of (net) housing wealth inequality. In this report, we present a descriptive exploration of cross-sectional patterns in (housing) wealth inequality across 23 European countries, present in the fourth wave of the HFCS (Household Finance and Consumption Survey, ECB, 2010-2021; data from Poland are from wave 3). We advance the state-of-the art by: 1) conceptualizing alternative measures of *gross* housing wealth and non-housing wealth that are more in tune with the comparative literature on housing-welfare regimes, and allow to account for cross-national differences in mortgage finance as well as differing housing wealth accumulation trajectories over the life-course investigating and qualifying established relationships for a larger sample of countries from this alternative angle, broadening the focus from relative inequality to absolute levels of (housing) wealth, as well as to the concentration of (housing) wealth across the income distribution (hence, addressing the intersection with household income); and 3) analysing further intersections with age group/cohort and degree of urbanization.

A first conclusion from this report is that, using alternative measures of (housing) wealth and wealth inequality on a much larger sample of countries, on the surface, still produces well-known stylized relationships. In particular, ***a country-level negative association between homeownership rates/housing wealth inequality and total wealth inequality can be established***: to the extent that specifically lower-

wealth/income households are able to accumulate housing wealth, the overall level of wealth inequality tends to be lower. Differences between concepts of gross and net (housing) wealth do not seem to make much difference, as the majority (2/3) of homeowners across the enlarged EU does not have any outstanding mortgage debt. We note in companion reports that in many European countries, the outstanding residential mortgage debt (RMD)/GDP-ratio has declined since 2009, particularly in those countries where these ratios were (too) high.

The negative association between homeownership and (gross) wealth inequality comes about through different mechanisms, such as higher home-ownership rates and hence a ***higher preponderance of housing wealth in the wealth portfolio of lower-income households as we move from North to South and from West to East***, combined with the fact that non-housing wealth tends to be more unequally distributed than housing wealth. ***Higher relative inequality in housing wealth is, in general, not compensated for by higher equality of housing wealth***. Put differently: whilst (low-income) homeowner-households own both housing wealth and some level of non-housing wealth, similar renters tend to own comparably lower amounts of non-housing wealth. In the countries belonging to the unitary rental market housing-welfare regime, however, levels of non-housing wealth inequality tend to be lower in comparative perspective but are still similar to levels of housing wealth inequality. The (relative) inequality-reducing impact of housing wealth in the countries with a unitary rental market is far more limited and even non-existent in Austria, compared with other countries. The rather unique position of unitary rental market-countries indicates that (historical) housing policies play an important role in modifying this association, in particular in terms of renters' opportunities to accumulate non-housing wealth. Put differently, from the negative association between homeownership and relative wealth inequality it should *not* be inferred that increasing homeownership results in lower wealth inequality. Housing policies, rather than homeownership rates *per se*, are key. The 'standard' focus on country-level summary measures of relative wealth inequality, furthermore, obscures relevant differences in other respects.

Looking at absolute wealth levels, across all European countries, the wealth rate of renters is very low: median gross wealth of renters amounts to less than half of their

gross annual household income, whilst the non-housing wealth of homeownership households amounts to seven times their gross annual household income. The average tenure wealth gap across Europe, defined as median gross total wealth of owners divided by median gross total wealth of renters, amounts to 25.1 (and ranges from 16.5 in Austria to 38.0 in Ireland): **owners own far more non-housing wealth than renters**. The tenure wealth gap is lower in housing-welfare regimes with a unitary rental market, where renter-households comparatively own higher levels of (non-housing) wealth. It is also smaller in Eastern-Europe, but this is explained by comparatively lower wealth levels of homeowners. With the exception of Luxembourg, where the median renter is particularly rich, across European countries the level of non-housing wealth owned by renters is so low that, for most and based on these resources alone, obtaining a mortgage/entering homeownership is 'mission impossible'.

Lastly, this report investigated the concentration of (gross) housing wealth across the income distribution. **Across European countries, housing wealth is unequally concentrated across the income distribution**: on average (across all households), the bottom quintile owns 11.9% of total gross housing wealth, whilst the top quintile owns 34.5% of total gross housing wealth. Notwithstanding between-country differences within each housing-welfare regime group, **the concentration of (gross) housing wealth across the income distribution becomes less severe when we move from North to South, and from West to East. Again, this pattern is driven by cross-national differences in homeownership rates**: abstracting from the tenure structure, the concentration of housing wealth across income quintiles is remarkably similar across countries in the enlarged EU. **Particularly across Western-Europe, (gross) housing wealth is more concentrated in each younger age cohort**: younger high-income households own a larger share of total housing wealth (in their cohort) compared with older counterparts, and younger low-income households own a smaller share of total housing wealth (in their cohort) compared with older counterparts. A similar trend is (much) less outspoken in Eastern-European countries and mostly comes about by deteriorating housing wealth shares of low-income young households. **In North-Western-Europe, compared with thinly populated areas, in densely populated areas higher-income households own a comparatively larger share of total housing**

wealth, whilst lower-income households own a comparatively smaller share of total housing wealth. In the Southern-European countries for which degree of urbanization is available, a similar but less intense difference in the concentration of housing wealth comes about by the comparative smaller housing wealth holdings of lower-income households, with an increasing degree of urbanization. Intersections with degree of urbanization are less clear in Eastern-Europe.

Future research could attempt to disentangle, across the different housing-welfare regimes, how changing tenure structures, in particular the generational and/or stratified decline of young adult-homeownership across European countries, is intertwined with trends in the housing wealth position of subsequent cohorts. So far, most comparative research has focused on describing population-wide distributions of (housing) wealth and has struggled to analytically separate the impact of several contributing 'trends over time', such as access to homeownership/housing wealth, differential trends in capital gains for relevant intersections (e.g. income groups), and the suspected rise of multi-property ownership. It, similarly, remains an open question how the housing affordability crisis has affected non-housing wealth holdings of renters (both in absolute terms and relative to their opportunities to enter homeownership). An important caveat is that, for all the detailed information on wealth, HFCS does not contain much information regarding the quality of housing. Given our focus on gross housing wealth, furthermore, (mortgage) debt has so far remained out of scope.

Appendix A:

Overview of sample sizes by wave and country (household level)

Country	Wave 1 (n=15)		Wave 2 (n=20)		Wave 3 (n=22)		Wave 4 (n=22)	
	Original	Implicates	Original	Implicates	Original	Implicates	Original	Implicates
AT	2380	11900	2997	14985	3072	15360	2293	11465
BE	2327	11635	2238	11190	2329	11645	2130	10650
CY	1237	6185	1289	6445	1303	6515	1332	6660
CZ							3122	15610
DE	3565	17825	4461	22305	4942	24710	4119	20595
EE			2220	11100	2679	13395	2247	11235
ES	6106	30530	6120	30600	6413	32065	6313	31565
FI	10989	54945	11030	55150	10210	51050	9474	47370
FR	15006	75030	12035	60175	13685	68425	10253	51265
GR	2971	14855	3003	15015	3007	15035	3386	16930
HR					1357	6785	1357	6785
HU			6207	31035	5968	29840	6032	30160
IE			5419	27095	4793	23965	6020	30100
IT	7951	39755	8156	40780	7420	37100	6239	31195
LT					1664	8320	1676	8380
LU	950	4750	1601	8005	1616	8080	2010	10050
LV			1202	6010	1249	6245	1219	6095
MT	843	4215	999	4995	1004	5020	1018	5090
NL	1301	6505	1284	6420	2556	12780	2690	13450
PL			3455	17275	5858	29290		
PT	4404	22020	6207	31035	5924	29620	6107	30535
SI	343	1715	2553	12765	2014	10070	1951	9755
SK	2057	10285	2135	10675	2179	10895	2174	10870
Households	62430	312150	84611	423055	91242	456210	83162	415810
Individuals	154239	771195	210345	1051725	221865	1109325	197006	985030

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