2 The distribution of housing assets

The chapter examines how housing wealth and liabilities are distributed across households with different levels of income and wealth and across households of different ages and generations. The chapter also discusses the role of inheritances and gifts in the acquisition of housing. The findings in this chapter inform the policy assessments and reform options outlined in the remainder of the report.

2.1. Introduction

Understanding the distribution of housing wealth is essential for the design of effective and equitable housing tax policies. Accounting for the distribution of housing wealth and housing debt can help policy makers anticipate the impacts of housing taxes. This chapter presents key indicators of the distribution of housing assets and liabilities across OECD countries (Box 2.1). In particular, it documents how the allocation of housing wealth and debt varies across the income and wealth distributions and across the lifecycle. It also examines how homeownership has changed over generations and touches on the role of inheritances in the acquisition of housing. The findings in this section hold significant relevance for the design of housing taxes, and help to inform the policy assessment and options for reform outlined in the remainder of the report.

Housing is a key component of household wealth, especially for the middle class, although it tends to be concentrated among older, high-wealth, and high-income households. Housing is a key vehicle for wealth accumulation and is a particularly important asset for middle-class households. Homeownership rates vary widely across countries, but they rise with income in nearly all countries. Housing wealth (both owner-occupied housing and secondary real estate) is highly concentrated among high-wealth households, and to a lesser extent among top income earners. High-income households hold a disproportionately large share of housing debt but lower-income households with mortgages generally face higher debt burdens, which has implications for tax relief on mortgage interest. Homeownership and housing wealth are strongly associated with age. Older households tend to have high levels of housing wealth but low levels of income, raising potential liquidity concerns linked to the taxation of housing. Evidence also shows that homeownership rates have been declining for younger generations, particularly lower-income and lower-wealth households. In addition, those who receive inheritances are much more likely to become homeowners in some countries. The distributional impact of housing taxation policies will depend on whether policy makers measure their effects along the income distribution or the wealth distribution and will differ in absolute and relative terms, given the concentration of housing wealth at the top yet the importance of housing for the middle class.

2.2. Household wealth and homeownership

Housing is the main asset category for most households and accounts for the bulk of household wealth for the middle class. Owner-occupied housing wealth ranges from 28% of total gross household wealth in the United States to 65% in the Slovak Republic, but accounts for 50% of total household wealth on average across the 29 OECD countries with available data and comprises over half of total household wealth in 17 countries (Figure 2.1). Secondary real estate[1] also makes up a significant component of gross household wealth in many OECD countries, where it is generally the second or third largest household asset class. Owner-occupied housing is particularly important for households in the middle of the wealth distribution (i.e. the second, third, and fourth quintiles), where it accounts for roughly 65% of household wealth on average (Figure 2.2). This share is significantly smaller at the top of the wealth distribution, where households hold a large portion of their wealth as financial assets; for example, owner-occupied housing comprises on average just 21% of household wealth for the top 1%. Owner-occupied housing is also relatively less important among the lowest wealth quintile, where it comprises 52% of household assets on average, as other real assets (e.g. vehicles, valuables, and other non-housing goods) play a comparatively larger role in household wealth. Several factors contribute to the predominance of housing within middle class wealth. For example, owner-occupied housing is both a consumption and investment good that is typically heavily tax-favoured compared to most other savings vehicles (OECD, 2018[1]). Housing is also often perceived as a safe investment and allows people to live on lower incomes once their mortgage debt is repaid (i.e. in retirement). The availability of housing-related debt finance has also allowed

lower-wealth households to accumulate substantial levels of net housing wealth over their lifetimes (Causa, Woloszko and Leite, 2019[2]).

Figure 2.1. Average decomposition of household assets, 29 OECD countries

2019 or latest available year

Source: OECD Wealth Distribution Database, oe.cd/wealth.

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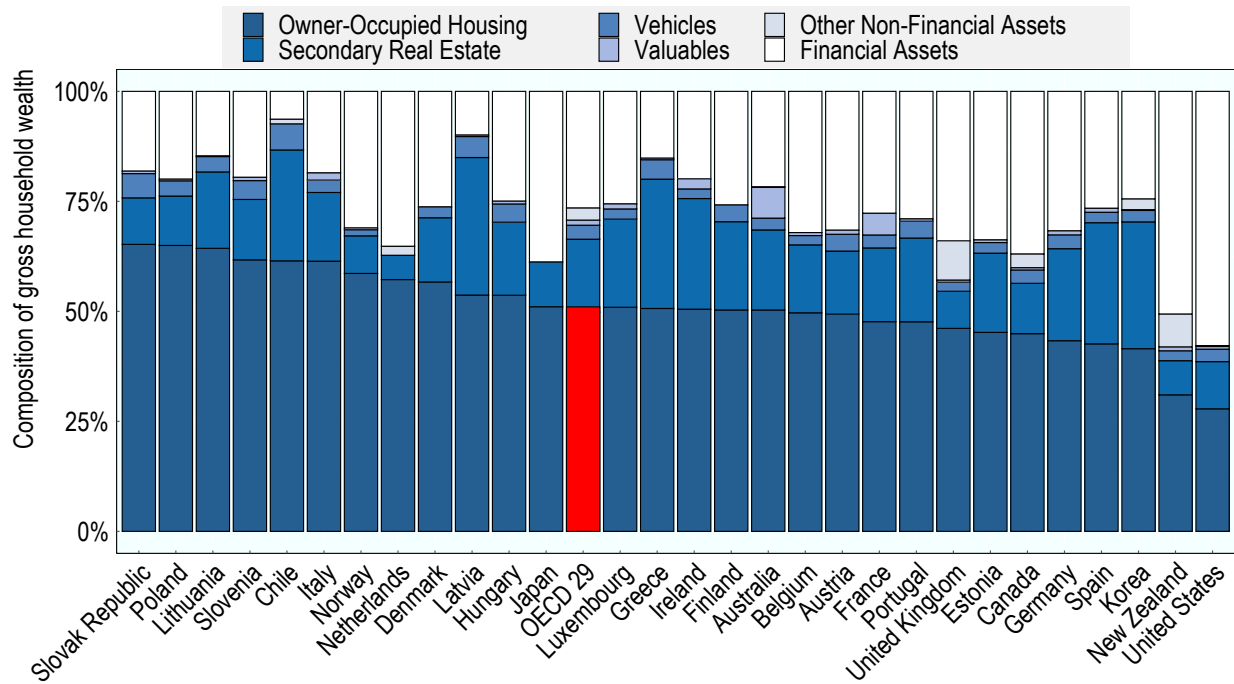
Figure 2.2. Composition of household assets by wealth quintile, unweighted average, 29 OECD countries

2019 or latest available year

Note: Quintiles range from first (lowest) to fifth (highest). See Box 2.1 for a description of how quintiles are calculated. Average of Australia, Austria, Belgium, Canada, Chile, Germany, Denmark, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, Japan, Korea, Lithuania, Luxembourg, Latvia, Netherlands, Norway, New Zealand, Poland, Portugal, Slovak Republic, Slovenia, Spain, United Kingdom, United States. Missing observations were removed.
Source: OECD Wealth Distribution Database, oe.cd/wealth.

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Box 2.1. Measuring household wealth

Data sources

This chapter draws extensively on the OECD's Wealth Distribution Database (WDD), which includes data on 29 OECD countries, and the European Central Bank's Household Finance and Consumption Survey (HFCS), which includes data on 19 European OECD countries. Data are available in both datasets for Austria, Belgium, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Poland, Portugal, Slovak Republic, Slovenia, and Spain. Data are available only in the WDD for Australia, Canada, Chile, Denmark, Japan, Korea, New Zealand, Norway, the United Kingdom (limited to Great Britain) and the United States.

Both sources provide micro-level data that is largely comparable across participating countries. The HFCS draws on household surveys whose questionnaires are harmonised across participating countries. The WDD relies on tax and administrative data for three countries (Denmark, the Netherlands, and Norway), while estimates for the remaining countries are based on household surveys, which includes the HFCS for participating countries.

Indicators

The chapter examines non-equivalised household wealth; that is, without adjusting for household size. Gross wealth is the sum of the total assets of households, while net wealth is the difference between the total assets and the total liabilities of households (this means net wealth may be negative). Note that household wealth does not include public or occupational pensions. Throughout this chapter, net wealth is generally used to examine overall wealth levels, as it better reflects the wealth that households have at their disposal. Gross wealth is generally used for compositional analysis, which avoids the possible problem of negative wealth.

The chapter examines how wealth is distributed across the income and wealth distributions. Income quintiles are calculated on household non-equivalised disposable income for Australia, Canada, Chile, Denmark, Finland, Italy, Japan, Korea, New Zealand, the Netherlands, Norway, the United Kingdom and the United States, and are based on household non-equivalised gross income for the remaining countries. While this reduces comparability across countries with different measures, the impact is expected to be minor as households typically occupy a similar relative position in the distribution of gross and disposable income. Wealth quintiles are calculated on household non-equivalised net wealth for all countries.

It is important to be cautious when interpreting the results contained in this chapter. As no adjustment is made for household size and because higher income and higher wealth households are less likely to be single-person households, the top 10% and top 1% may represent more than 10% and 1% of the population, respectively. Adjusting for household size could reduce the income and wealth share of the top households, although the extent of the reduction would depend on the country. In addition, across countries, different factors influence the levels and distribution of housing wealth, and the drivers behind trends in housing wealth will have changed over time. The enduring impact of past public policies, changing demographics, the development of mortgage markets and many other factors increase the complexity of the analysis.
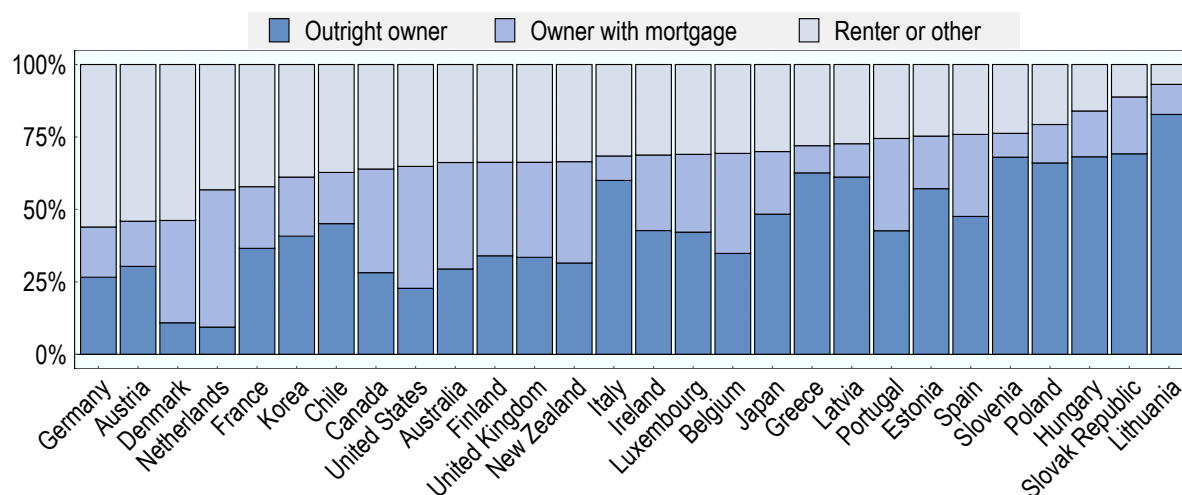
Source: Wealth Distribution Database: https://www.oecd.org/social/WDD-Metadata.pdf. Household Finance and Consumption Survey https://www.ecb.europa.eu/pub/economic-research/research-networks/html/researcher_hfcn.en.html

The proportion of homeowners and renters varies substantially across OECD countries. The proportion of households that own their home (with or without a mortgage) is lowest in Germany (44%),

followed by Austria (46%) and Denmark (46%), with the remainder renting or living in other forms of tenure (Figure 2.3). On the other hand, 93% of households in Lithuania own their primary residence, with particularly high levels also found in the Slovak Republic (89%) and Poland (84%). Homeownership patterns vary across regions, with lower homeownership rates in Northern and Western European countries, compared to particularly high levels in Central and Eastern Europe. In general, homeownership rates in Anglophone countries (e.g. Australia (66%), Canada (64%), the United States (65%)) and Southern European countries (e.g. Greece (72%), Italy (68%)) fall between these two groups. Among homeowners, the tendency to hold a mortgage also differs considerably across countries. In the Netherlands, for example, only 9% of households are outright owners of their primary residence and 47% of households own their residence with a mortgage. In contrast, just 8% of households in Slovenia own their primary residence with a mortgage, while 68% own their home outright. The role of debt finance in the acquisition of owner-occupied housing wealth appears to play a far greater role in some OECD countries than in others (see Figure 2.14).

Figure 2.3. Share of households that are renters, owners with a mortgage, or outright owners, 28 OECD countries

2019 or latest available year

Note: A breakdown between outright owners and owners with a mortgage was not available for Norway.
Source: OECD Wealth Distribution Database, oe.cd/wealth.

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Homeownership rates are highest at the top of the income distribution in nearly all OECD countries, but there are substantial differences in homeownership for lower- and middle-income households. Figure 2.4 shows that homeownership rates are generally highest for households in the top income quintile; more than three-quarters of top income households are homeowners in 26 of the 29 OECD countries with available data. However, there is considerable cross-country variation for households with lower incomes. In several Central and Eastern European countries (e.g. Hungary, Lithuania, the Slovak Republic), homeownership is widespread along the income distribution with marginal differences across income quintiles. Other countries, such as Japan and Poland, have larger differences between quintiles but still exhibit high rates of homeownership across the board. Germany, the Netherlands, and Canada have low levels of homeownership among the bottom quintile and considerable disparities between successive

income groups, while countries such as Chile and New Zealand display comparable but low levels of homeownership across the distribution. These cross-country differences in homeownership rates along the income distribution align with the country differences in housing tenure types displayed in Figure 2.3. In countries with a low proportion of renters, homeownership appears to be broadly accessible across the income distribution. Where renting is widespread, however, homeownership is more dependent on household income.

Figure 2.4. Homeownership rate by income quintile, 29 OECD countries
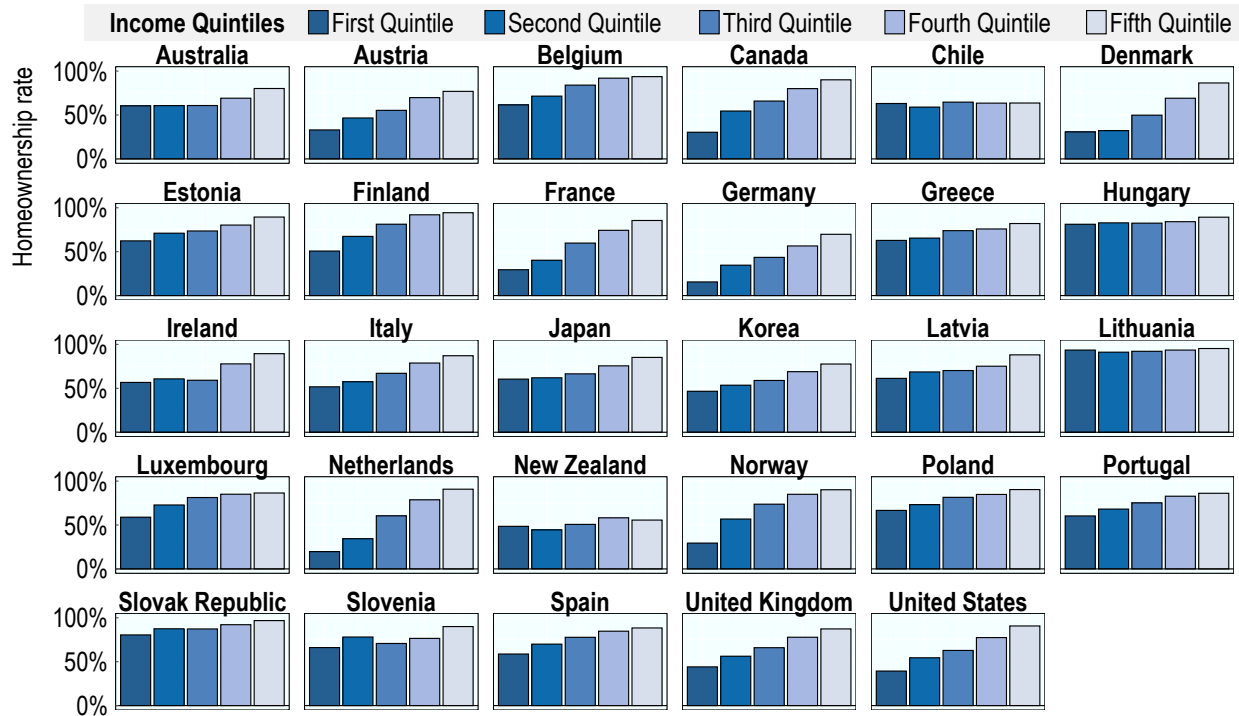
2019 or latest available year

Note: Quintiles range from first (lowest) to fifth (highest). See Box 2.1 for a description of how quintiles are calculated. This indicator only refers to the ownership of households' primary residences, and does not account for homeowners who may rent their primary residence and own secondary property.
Source: OECD Wealth Distribution Database, oe.cd/wealth.

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Despite marked differences in homeownership patterns across OECD countries, there are striking similarities in the relationship between housing tenure and households' relative levels of income and wealth. Figure 2.5 examines renters, outright owners, and owners with a mortgage, comparing their income and wealth to that of the total population in each of the 27 OECD countries with available data. The figure measures the ratio of each group's mean net wealth to the mean net wealth of the total population (on the y-axis) and the ratio of each group's mean pre-tax income to the mean pre-tax income of the total population (on the x-axis) in each country. In all countries, levels of income and wealth among renting households are significantly lower than the population average. This reflects the key role of owner-occupied housing in household wealth, as well as the importance of income to service mortgage debt and save for a down payment. As young households are highly concentrated among renters (Causa, Woloszko and Leite, 2019[2]), access to quality jobs, mortgage finance, and affordable housing are key for this group

to build wealth over their lifecycle. Owners with mortgages, on the other hand, tend to have higher incomes while holding average levels of net wealth. This group is largely comprised of people in the middle of their careers (Causa, Woloszko and Leite, 2019[2]), who have substantial debt relative to their total wealth but earn sufficiently high incomes to service their mortgage. Lastly, outright owners possess above-average net wealth with average levels of income. This group contains a large number of elderly households (Causa, Woloszko and Leite, 2019[2]), who have finished repaying their mortgages and no longer earn substantial income.

Figure 2.5. Net wealth and gross income relative to population average by housing tenure type, 27 OECD countries

2019 or latest available year

Note: Each dot corresponds to a single country. These indicators were calculated by taking the average value of gross income and net wealth for each group in a particular country and dividing by the average values found among all households in that country. On each axis, the value of 1 is equal to the population average. Countries included are Australia, Austria, Belgium, Canada, Chile, Germany, Denmark, Spain, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, Japan, Korea, Lithuania, Luxembourg, Latvia, New Zealand, Poland, Portugal, Slovak Republic, Slovenia, United Kingdom, United States. Gross income data were not available for the Netherlands and a breakdown between outright owners and owners with a mortgage was not available for Norway.
Source: OECD Wealth Distribution Database, oe.cd/wealth.

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## 2.3.   Housing assets and liabilities across the income and wealth distributions

Mean owner-occupied housing wealth varies substantially across countries, though it is systematically higher for top income households and lower for those at the bottom. The upper panel in Figure 2.6 shows that mean gross owner-occupied housing wealth for all households is USD 164 500 on average across OECD countries, and ranges from USD 28 500 in Latvia to USD 582 000 in

Luxembourg. It is interesting to note that countries with the highest mean gross housing wealth often have average homeownership rates, while Central and Eastern European countries with particularly high homeownership rates have relatively low mean housing wealth (Figure 2.3, Figure 2.6). As overall housing wealth follows from homeownership levels and housing values, this reflects low housing asset values in Eastern Europe. Figure 2.6 also reports average owner-occupied housing wealth for households in the top and bottom income quintiles. In all countries, households at the top of the income distribution have the highest average housing wealth and households at the bottom of the income distribution have the lowest. Average owner-occupied housing wealth for households in the top income quintile (USD 309 500) is almost twice that of the population average (USD 164 500) and more than three and a half times higher than the average among the bottom quintile (USD 79 500).

The level of secondary real estate wealth is lower than the level of owner-occupied housing wealth, but it is much more concentrated at the top of the income distribution (Figure 2.6). Mean gross secondary real estate wealth amounts to USD 157 000 on average across countries and is lower than mean owner-occupied housing wealth in every country, ranging from USD 11 500 in Poland to USD 229 000 in Luxembourg. These assets are also significantly more concentrated among the top income quintile. Average gross secondary real estate wealth for households at the top of the income distribution (USD 157 000) is roughly three times that of the population average (USD 53 000) and almost nine times higher than the average among the bottom quintile (USD 18 000).

Figure 2.6. Mean gross wealth in owner-occupied housing and secondary real estate, all households and top and bottom income quintiles, 29 OECD countries
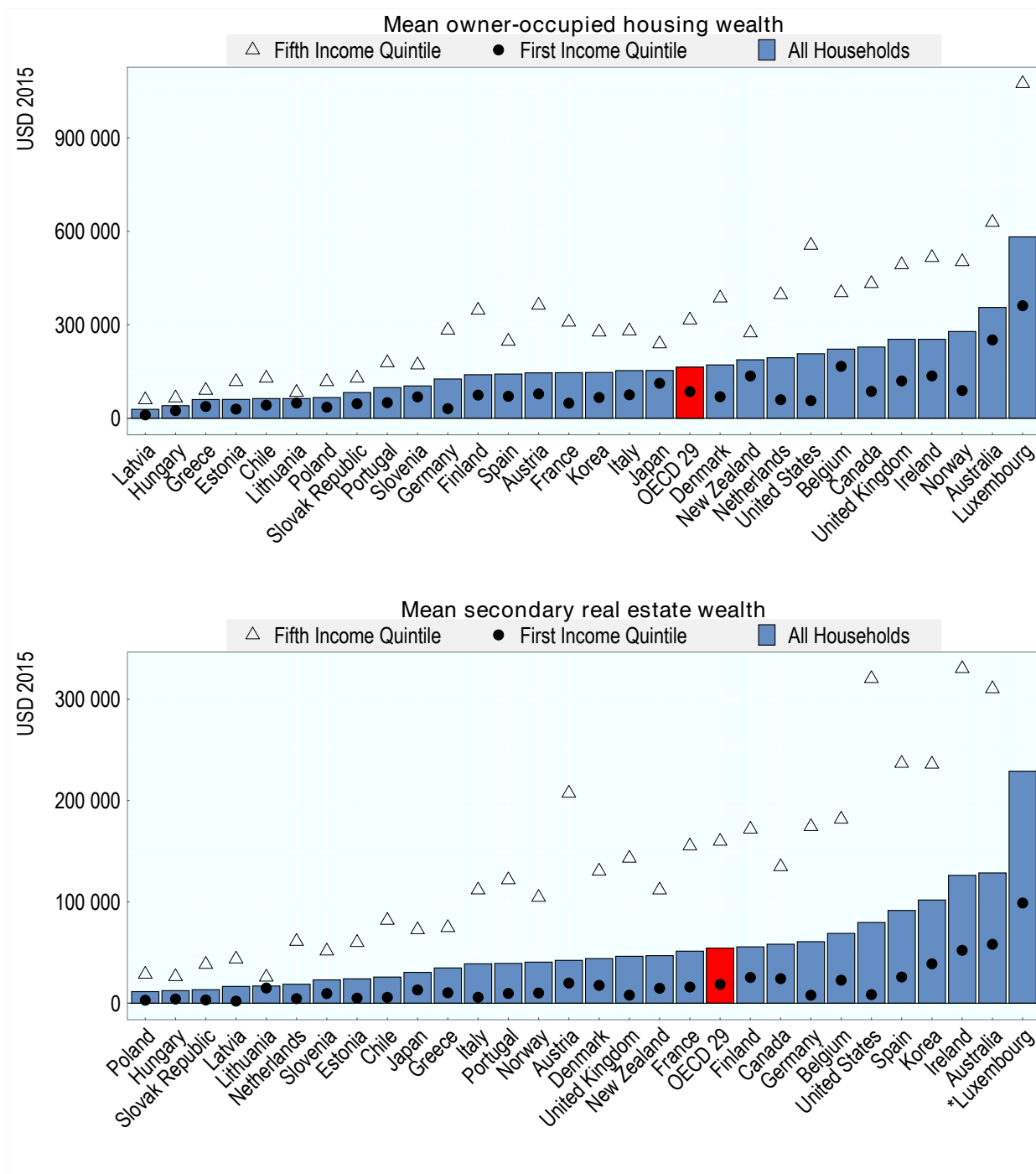
2019 or latest available year

Note: Quintiles range from first (lowest) to fifth (highest). See Box 2.1 for a description of how quintiles are calculated. Wealth values are expressed in 2015 USD by, first, expressing values in prices of the same year (2015) through consumer price indices and, second, by converting national values into PPP USD.

*The mean level of secondary real estate wealth for the top income quintile in Luxembourg is USD 889 500. This observation was removed for readability.

Source: OECD Wealth Distribution Database, oe.cd/wealth.

The wealthiest households hold a disproportionately large share of housing wealth and own the majority of secondary real estate wealth. Figure 2.7 looks across the wealth distribution and complements the analysis above on the income distribution, as income and wealth are not strongly correlated in OECD countries (OECD (2020[3])). Figure 2.7 shows that on average across 29 OECD countries, nearly half (46%) of total gross owner-occupied housing is held by households in the top wealth quintile. Households in the middle of the wealth distribution (i.e. the second, third, and fourth quintiles) together hold 51% of gross owner-occupied housing wealth, while those in the lowest wealth quintile own roughly 3%. Secondary real estate is even more concentrated at the top, where roughly 75% of wealth is held by households in the top wealth quintile. The middle of the wealth distribution, on the other hand, owns just 24% of secondary real estate, while the remaining 1% is held by households in the bottom quintile.

Figure 2.7. Share of owner-occupied housing and secondary real estate by wealth quintile, unweighted average, 29 OECD countries
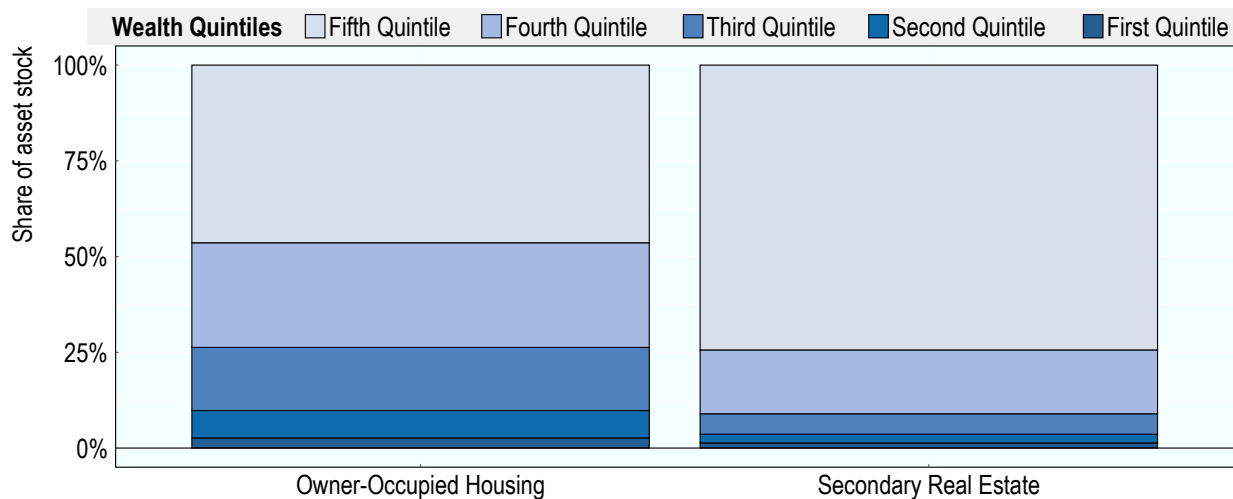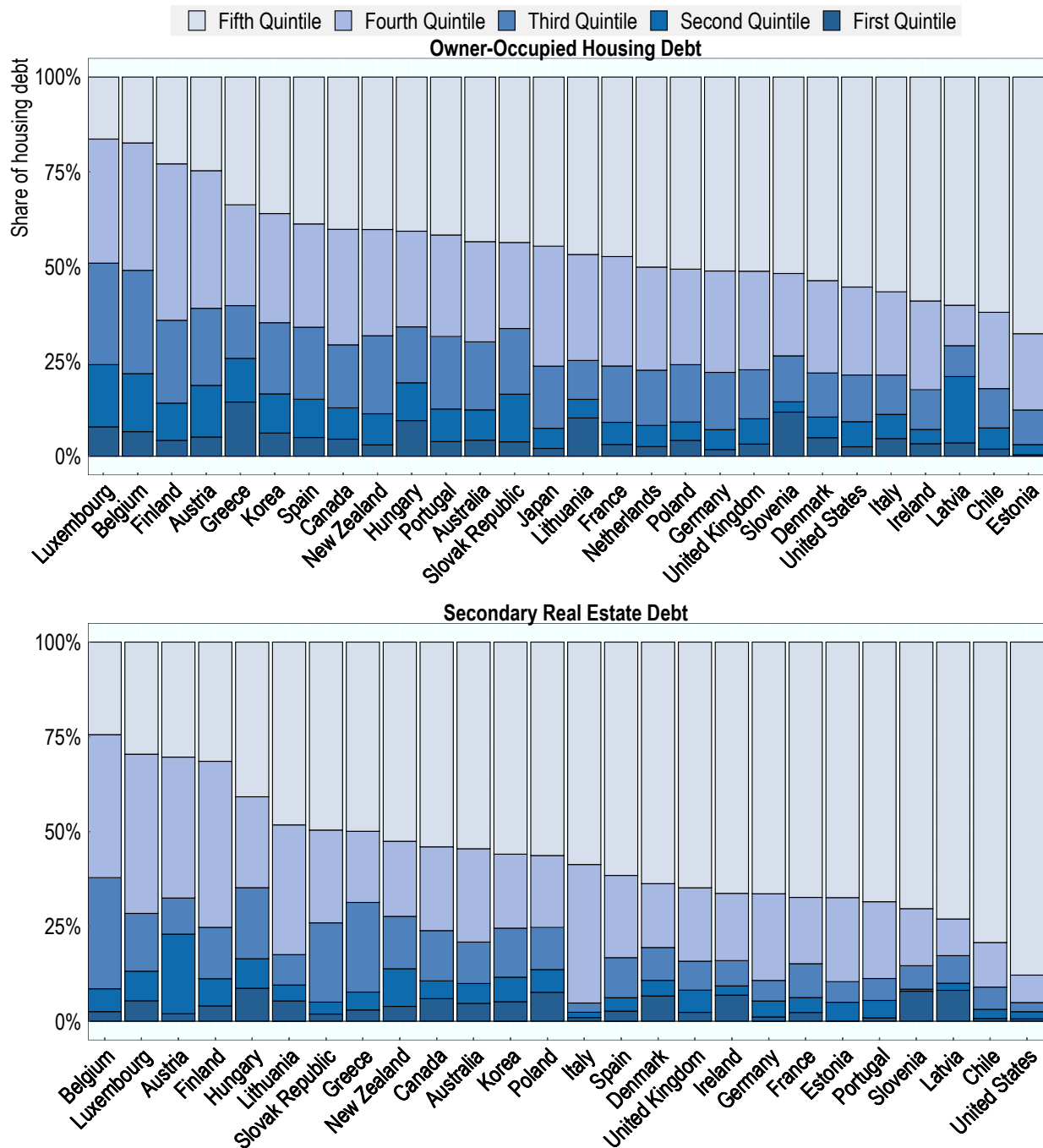
2019 or latest available year

Note: Quintiles range from first (lowest) to fifth (highest). See Box 2.1 for a description of how quintiles are calculated. Average of Australia, Austria, Belgium, Canada, Chile, Germany, Denmark, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, Japan, Korea, Lithuania, Luxembourg, Latvia, Netherlands, Norway, New Zealand, Poland, Portugal, Slovak Republic, Slovenia, Spain, United Kingdom, United States. Source: OECD Wealth Distribution Database, oe.cd/wealth.

Housing debt tends to be disproportionately concentrated in the top income quintile, while low-income households hold relatively little mortgage debt. Across 28 OECD countries, households in the top 20% of the income distribution typically own the largest share of total owner-occupied housing debt, ranging from 68% in Estonia to 16% in Luxembourg (Figure 2.8). Households in the middle of the income distribution (i.e. the second, third, and fourth income quintiles) hold 76% (Belgium) to 32% (Estonia) of owner-occupied housing debt, while the share of debt among households in the lowest income quintile ranges from 14% in Greece to 0.4% in Estonia. The distribution of secondary real estate debt is even more concentrated among households in the upper income quintile, who own 57% of all secondary real estate debt on average, compared with 45% of owner-occupied housing debt. The share of secondary real estate

debt held by the top income quintile ranges from 88% (United States) to 24% (Belgium), which is a significantly larger share than that held by households in the bottom quintile (highest in Hungary at 8.7% and lowest in Estonia at 0.09%). Differences between countries in the share of mortgage debt held across the income distribution may reflect factors such as housing affordability, the degree of concentration of income, and access to mortgage finance for households outside the top income quintile. For example, among countries where the share of owner-occupied mortgage debt is more evenly spread across the income distribution, households in the lowest four quintiles tend to make up a greater proportion of owner-occupied mortgage holders than in countries where holding a mortgage is more dependent on household income, suggesting that the volume of mortgages is an important factor in the distribution of mortgage debt. Cross-country differences may also reflect limited mortgage interest relief for high-income households, which reduces the incentive to hold large mortgages. The concentration of mortgage debt at the top has important distributional implications, as mortgage interest relief is widely available in OECD countries and is typically not capped for high earners (see Chapter 3).

Figure 2.8. Share of owner-occupied and secondary real estate debt by income quintile, 28 OECD countries

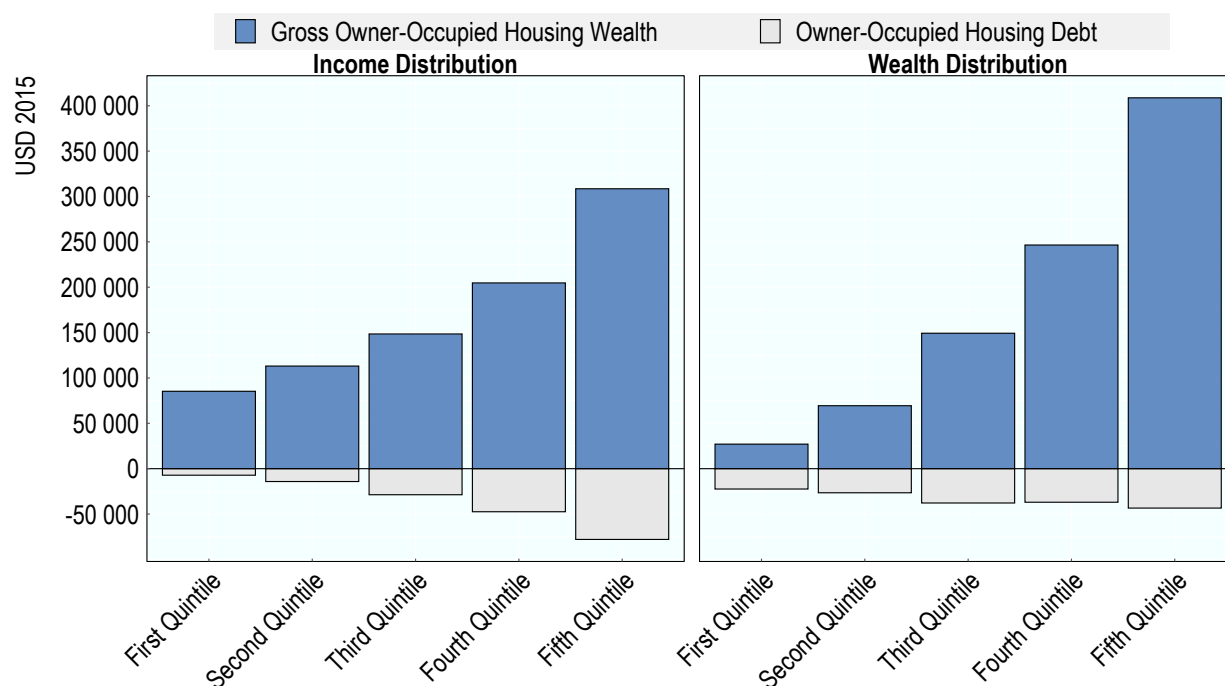2019 or latest available year

Note: Quintiles range from first (lowest) to fifth (highest). See Box 2.1 for a description of how quintiles are calculated. Data on owner-occupied housing debt were not available for Norway. Data on secondary real estate debt were not available for Norway, Japan and the Netherlands.
Source: OECD Wealth Distribution Database, oe.cd/wealth.

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Mortgage debt is highly concentrated among top income households, while it is more equally distributed along wealth quintiles. Households in the top income quintile hold the highest absolute levels of mortgage debt, compared to both lower-income households and all wealth quintiles (Figure 2.9). In contrast, mortgage debt is particularly low for households at the bottom of the income distribution, driven in part by low-income retirees who have finished paying off their mortgages, and by other households whose incomes are simply too low to obtain a mortgage. On the other hand, households at the bottom of the wealth distribution have much larger debt relative to household wealth than households at the top, and mortgage debt is more evenly distributed across the wealth distribution in general. The differences in the composition of income and wealth quintiles suggest that the distributional effects of housing tax policies will differ considerably depending on whether the income or the wealth distribution is considered.

Figure 2.9. Mean value of owner-occupied housing assets and liabilities by income and wealth quintiles, unweighted average, 28 OECD countries

2019 or latest available year

Note: Quintiles range from first (lowest) to fifth (highest). See Box 2.1 for a description of how quintiles are calculated. Average of Australia, Austria, Belgium, Canada, Chile, Germany, Denmark, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, Japan, Korea, Lithuania, Luxembourg, Latvia, Netherlands, New Zealand, Poland, Portugal, Slovak Republic, Slovenia, Spain, United Kingdom, United States. Data on owner-occupied housing debt were not available for Norway. Wealth values are expressed in 2015 USD by, first, expressing values in prices of the same year (2015) through consumer price indices and, second, by converting national values into PPP USD.
Source: OECD Wealth Distribution Database, oe.cd/wealth.

StatLin https://stat.link/g6czns

While owner-occupied housing debt is disproportionately concentrated at the top of the income distribution, low-income households with mortgages tend to face larger relative debt burdens than their high-income counterparts. Figure 2.10, drawing on the level of owner-occupied housing debt relative to gross income on average for 19 OECD countries, finds that two-thirds of mortgage-bearing

households[2] in the bottom income quintile face a mortgage debt-to-income ratio greater than three. This percentage declines with each successive income quintile and is less than 10% for mortgage-bearing households in the top income quintile. Conditional on holding a mortgage, lower-income households therefore have larger debt burdens and may be more likely to face difficulties in servicing their housing debt. Policy initiatives aimed at supporting households with mortgage debt (such as mortgage interest relief) may have a larger relative impact on lower-income households, despite their small share of the overall stock of housing liabilities.

Figure 2.10. Proportion of mortgage-bearing households with owner-occupied mortgage debt equal to at least 3 times gross income, unweighted average, 19 OECD countries

2017 or closest available year
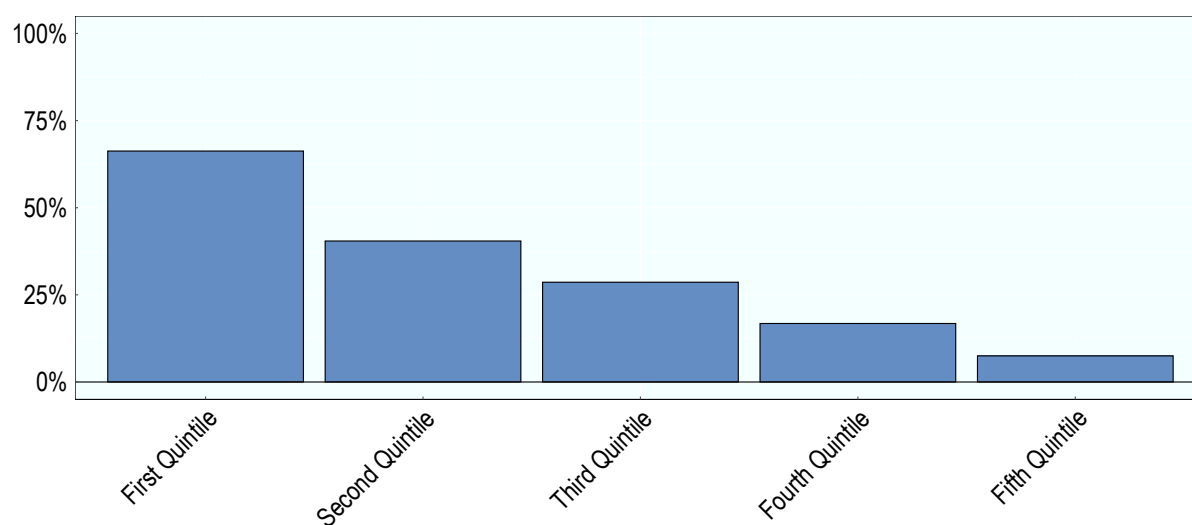
Note: Quintiles range from first (lowest) to fifth (highest). See Box 2.1 for a description of how quintiles are calculated. Average of Austria, Belgium, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Poland, Portugal, Slovak Republic, Slovenia, Spain. This indicator corresponds to the proportion of households with owner-occupied mortgage debt in each income quintile whose outstanding mortgage debt is 3 or more times larger than their gross annual household income.
Source: Eurosystem Household Finance and Consumption Survey.

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From a static perspective, higher rates of homeownership have been associated with lower levels of wealth inequality. Causa, Woloszko and Leite (2019[2]) find a negative cross-country association between homeownership and wealth inequality. Compared to financial assets, which make up the second largest share of household wealth on average (Figure 2.1), owner-occupied housing is more equally distributed across the income and wealth distributions. Causa, Woloszko and Leite (2019[2]) also find that the Gini index of total net wealth is lower than the Gini index of financial and non-housing real wealth (i.e. removing housing from overall net wealth), suggesting that housing tends to equalise the distribution of wealth from a static perspective.

From a dynamic perspective, the links between homeownership rates, house price increases and wealth inequality are more difficult to predict. High levels of homeownership can, in theory, moderate rising wealth inequality over time by ensuring that a large share of the population has access to an important vehicle for wealth accumulation. Under these circumstances, rising housing prices could bring greater relative benefits to the property-owning middle class (who, as noted above, hold the majority of

their assets in the form of owner-occupied housing) than to the top of the wealth distribution (Alvaredo et al., 2018[4]). However, rising housing prices are not free from distributional concerns. High-wealth households may derive greater absolute benefit from asset price inflation, while housing market access will inevitably decline for households who do not own property. High house prices can also raise household indebtedness, which is already high for low-income households. Rising house prices could thus exacerbate wealth inequality between households that own their residence and those that do not, and between households that can afford to service a mortgage and those that cannot. As discussed in Chapter 1, younger and poorer households are more likely to bear the adverse impacts of declining housing affordability. Younger generations will likely not be able to rely on housing as a vehicle for wealth accumulation in the same way that previous generations have done.

2.4. Housing across age groups

Homeownership and housing wealth vary across age groups, which reflects a combination of lifecycle and generational effects. Differences in homeownership and housing wealth across age groups may reflect the fact that these vary along stages of the lifecycle. For instance, as people age, they may be more likely to become homeowners and accumulate housing wealth. These differences may also reflect changing access to homeownership between different generations. For example, homeownership rates at a given age may be different for households born at different times. This section looks at homeownership and housing wealth across age groups by looking at both cross-sectional data (i.e. at a fixed point in time), which capture a combination of lifecycle and generational effects, and panel data focusing on generational effects in a few countries.

Housing wealth rises steadily with age on average across OECD countries, while mortgage debt is highest as households enter a period of the lifecycle characterised by relatively high earnings. Figure 2.11 displays mean gross and net owner-occupied and secondary housing wealth and mean debt on owner-occupied and secondary housing across household age groups, according to the age of the household head.[3] Gross owner-occupied housing wealth increases with age from the 16-34 age group up to the 45-54 age group, before it stabilises for households aged between 45 and 74 and then declines for households aged over 75. Net owner-occupied housing wealth, however, rises steadily until the 65-74 age bracket, after which it falls slightly for the oldest group. This indicates a key role of mortgage debt in facilitating the accumulation of housing wealth; gross wealth jumps as households enter the housing market but net wealth rises slowly as households pay down their mortgage. Indeed, the graph shows a substantial increase in mean owner-occupied mortgage debt in the 35-44 age group, suggesting that households are most likely to take out a mortgage and begin accumulating housing wealth as they enter a period of the lifecycle characterised by relatively high and stable incomes. Mean owner-occupied housing liabilities then drop substantially with age after peaking for 35-44 year olds, as households gradually repay this debt over the course of their working lives. Secondary housing wealth is much lower than owner-occupied wealth but follows a similar pattern over the lifecycle. Secondary housing wealth (both gross and net) rises steadily with age and peaks for households aged 55-64 years, after which households may begin drawing down their secondary housing wealth as they enter retirement. Debt peaks slightly later for secondary housing (45-54 age group) compared to owner-occupied housing (35-44), suggesting households may prioritise acquiring housing for their personal use before acquiring other housing.

Figure 2.11. Mean value of owner-occupied and secondary housing assets and liabilities by age group of household head, unweighted average, 26 OECD countries

2019 or latest available year
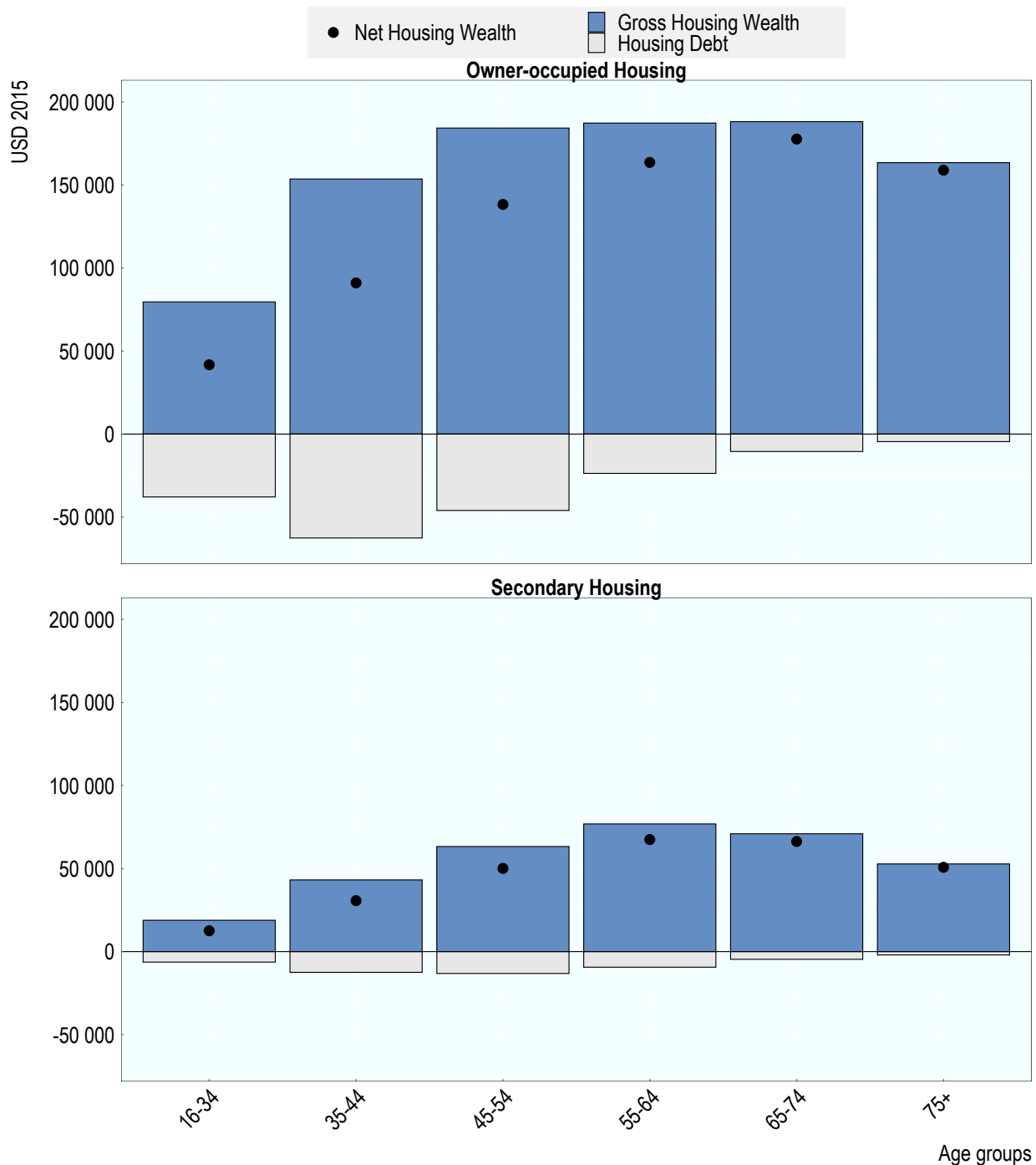
Note: Average of Australia, Austria, Belgium, Canada, Chile, Germany, Denmark, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, Korea, Lithuania, Luxembourg, Latvia, New Zealand, Poland, Portugal, Slovak Republic, Slovenia, Spain, United Kingdom, United States. Data on the breakdown of debt were not available for Norway. Data on secondary housing debt were not available for Japan and Netherlands. Wealth values are expressed in 2015 USD by, first, expressing values in prices of the same year (2015) through consumer price indices and, second, by converting national values into PPP USD.
Source: OECD Wealth Distribution Database, oe.cd/wealth.

There are remarkable similarities in the division of housing debt between different types of households, as mortgage debt is highly concentrated among two-adult working-aged households. Figure 2.12 shows that the majority of mortgage debt in every country is held by working-age households with two or more adults. It is particularly concentrated in two-adult working age households with children, whose share of the debt stock ranges from 42% in Denmark to 74% in Latvia. On the other hand, single working-age household heads (either with or without children) hold less than 20% of housing debt in nearly all cases, with the exception of Lithuania (33%) and Italy (21%). Retirement-age households also account for a particularly low share of mortgage debt, holding under 5% of mortgage debt in 21 of 28 OECD countries. This illustrates that the acquisition of housing debt is strongly linked to lifecycle factors, such as co-habitating with a partner and having children. The prevalence and age at which individuals in a given country will typically enter these stages will depend on a mixture of cultural and economic factors (e.g. cultural norms around families, access to the housing and labour markets, household income, the level of government support for families, etc.).

Figure 2.12. Share of owner-occupied housing debt by household composition, 28 OECD countries
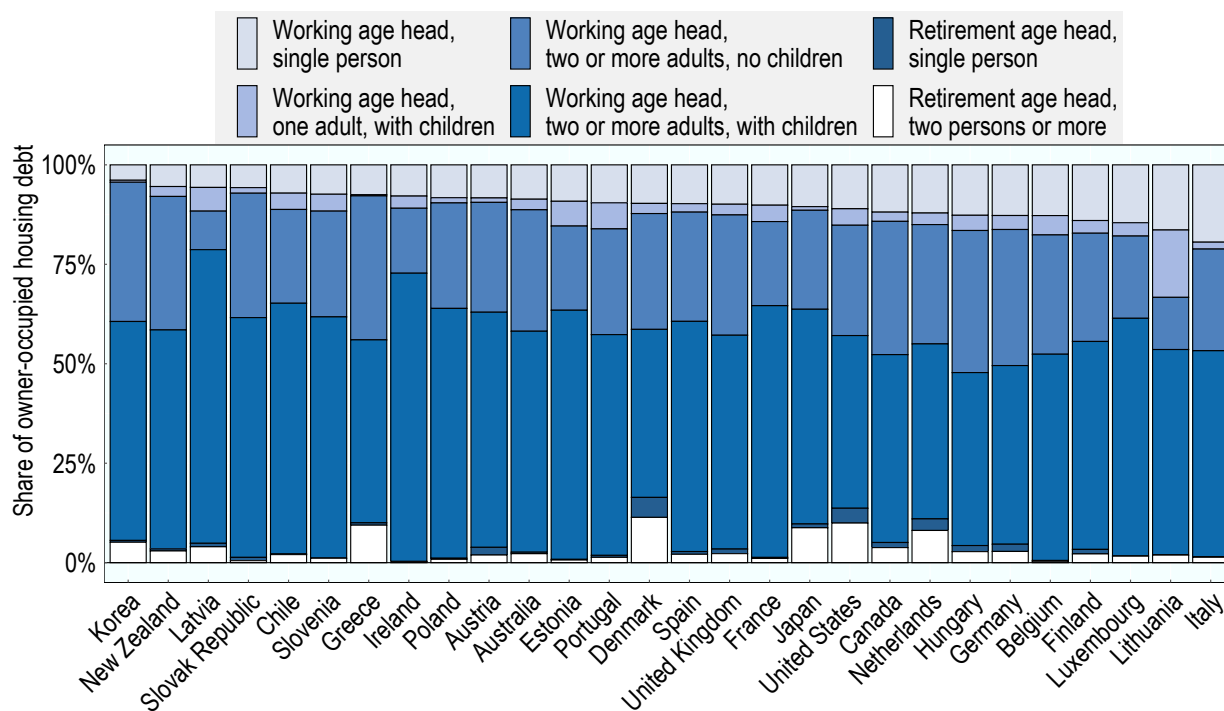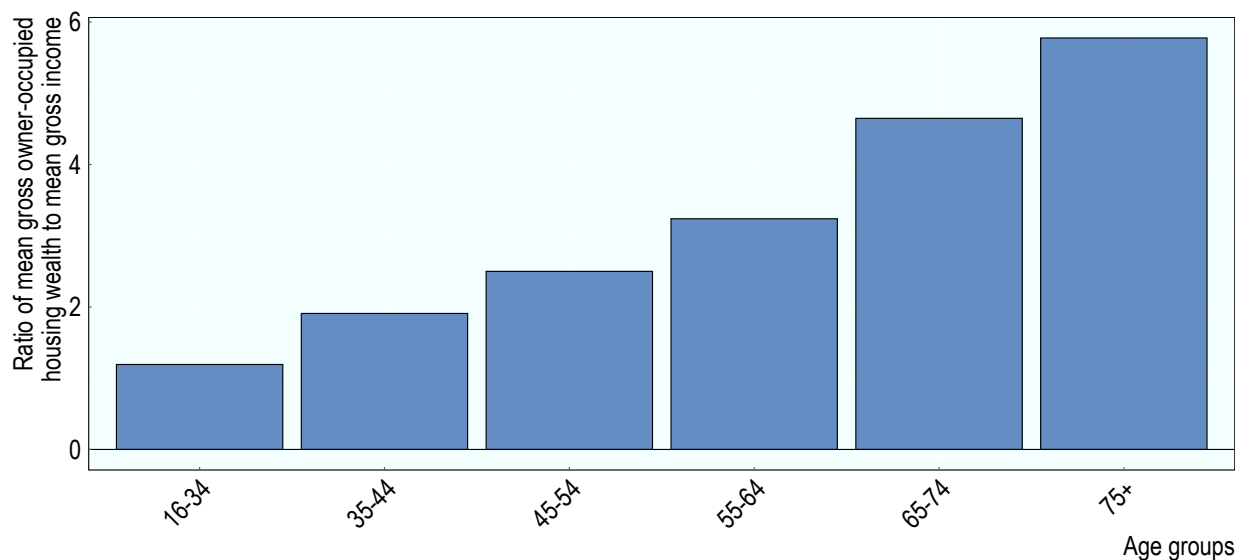
2019 or latest available year

Note: Data on owner-occupied housing debt were not available for Norway.
Source: OECD Wealth Distribution Database, oe.cd/wealth.

While older households generally have lower incomes and debt, they possess sizeable net housing wealth. Older populations comprise a large share of retirees, who generally have lower incomes compared to the rest of the population. However, older households possess high average levels of owner-occupied housing wealth and have limited outstanding mortgage debt (Figure 2.11). Figure 2.13 depicts the ratio of

mean owner-occupied housing wealth to mean gross household income for different age groups, on average across 26 OECD countries. The ratio increases steadily with the age of the household head and is highest for the 75+ year old category. When considered alongside Figure 2.11, the clear differences in this ratio across age groups seem to be driven by rising wealth for younger age groups and by declining income for older age groups. This points to the existence of a substantial group of relatively income-poor but asset-rich retirees in OECD countries. These findings suggests that housing taxation policies need to be designed with both income and wealth in mind and incorporate measures such as deferral, as older populations hold sizeable levels of housing wealth but might lack the necessary income and asset liquidity to meet their tax obligations.

Figure 2.13. Ratio of mean gross owner-occupied housing wealth to mean gross income by age of household head, unweighted average, 26 OECD countries

2019 or latest available year

Note: Average of Australia, Austria, Belgium, Canada, Germany, Denmark, Spain, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, Japan, Korea, Lithuania, Luxembourg, Latvia, New Zealand, Poland, Portugal, Slovak Republic, Slovenia, United Kingdom, United States. Data on gross household income were not available for the Netherlands. Data on owner-occupied housing debt were not available for Norway. Chile was removed due to extremely low values.
Source: OECD Wealth Distribution Database, oe.cd/wealth.

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Homeownership rates are generally higher for middle-aged and older households, although there are significant cross-country differences in the evolution of homeownership across age groups. While there are some similarities in homeownership rates for each age group, the typical timeline of housing wealth acquisition varies significantly across countries (Figure 2.14). Households led by 16-34 year olds have the lowest levels of homeownership in each of their respective countries. Homeownership rates then rise steadily with age in some countries, while in others homeownership rates rise for middle aged households before either stabilising or falling for the oldest households. In countries such as Australia and the United States, homeownership rates gradually increase with age, which suggests that some younger households are unable to access the property market or prefer not to become homeowners. In countries such as Belgium, Poland, and Portugal, homeownership largely plateaus at relatively high levels from the 35-44 year old age group onwards, suggesting relatively widespread housing market accessibility

for younger people. In countries such as Germany, Korea, and the Netherlands, there is a clear drop in homeownership rates for households of retirement age, which may be more reflective of differences in cohorts than in age. These differing patterns in homeownership across age groups reflect a range of cross-country differences, encompassing housing price affordability, the availability of finance (both mortgages and family contributions), historical homeownership rates and attitudes towards homeownership.

The importance of mortgage debt in facilitating homeownership and the age at which households pay off their mortgage differ considerably across countries. Figure 2.14 shows the proportion of households that hold a mortgage on their principal residence, by age of the household head. In many countries, nearly all young homeowners have mortgage debt, which suggests a crucial role of debt finance in enabling younger households to access homeownership (e.g. Australia, France, New Zealand). In countries such as Chile, Greece, and Lithuania, however, the share of young households with mortgage debt is far below the homeownership rates of younger households. This may suggest that mortgage finance is less accessible, that homeownership is affordable or that financial support from family plays a significant role in the acquisition of housing wealth for young households. As households age, the prevalence of mortgage debt declines across the board, as mortgage-bearing households progressively pay off their debt. In countries where few young households have mortgage debt, most homeowners appear to have paid off their mortgage by the time they reach 45 years of age (e.g. Hungary, Latvia, Lithuania, Poland). In addition to low initial debt levels and fewer households taking out mortgage debt, this may reflect shorter average loan terms and increasing access to mortgage finance for younger generations. In countries that have a closer link between homeownership and mortgage debt, mortgages tend to be repaid closer to retirement age (e.g. Australia, Japan, and New Zealand). In Denmark and the Netherlands, the proportion of households with mortgage debt peaks within the 45-54 year old age bracket and only diminish slightly over time, remaining relatively high into the 75+ year old age group. These cross-country differences in mortgage prevalence depend on a number of factors, such as housing affordability, access to credit and the tax treatment of housing and mortgage debt.

Figure 2.14. Proportion of households that own their principal residence and proportion of households that hold principal residence mortgage debt, by age group of household head, 29 OECD countries
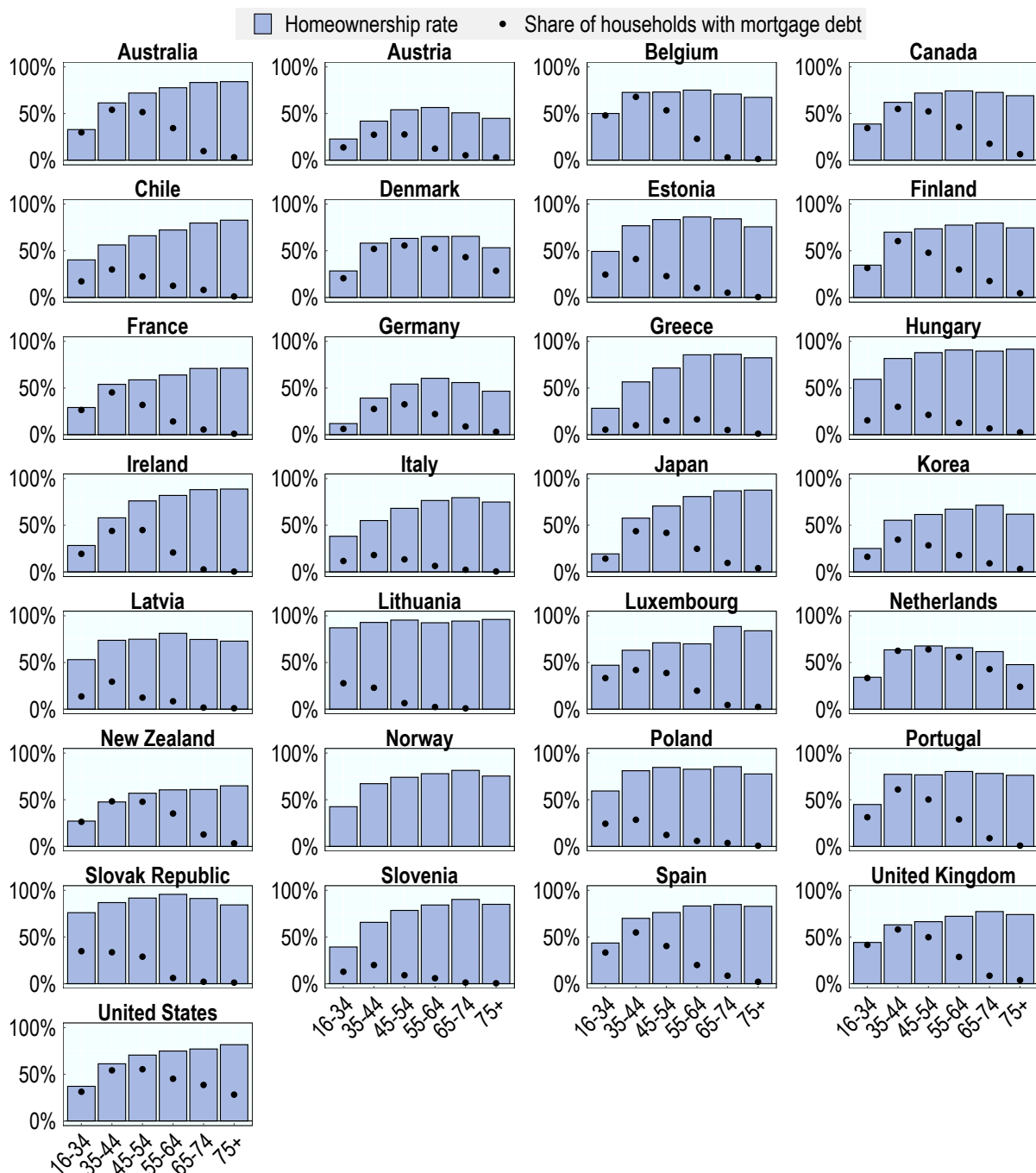
2019 or latest available year

Note: Data on owner-occupied housing debt were not available for Norway.
Source: OECD Wealth Distribution Database, oe.cd/wealth.

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Homeownership trends have changed over generations. While the cross-sectional data discussed above show significant differences in homeownership and housing wealth across age groups, these reflect both lifecycle effects (i.e. individuals being in different stages of their lives) and cohort effects (i.e. individuals being born at a particular time and living under different circumstances). Cross-sectional analyses therefore do not capture how homeownership rates may evolve for each group over their lives. In contrast, panel data can show, for example, how changes in homeownership rates between 30 and 40 years old may be different for households born in the 1960s compared to households born in the 1980s. Figure 2.15 and Figure 2.16 follow several cohorts over the lifecycle for a selection of countries for which data are available. The figures reveal that homeownership is declining and becoming less egalitarian for successive generations, as housing becomes more difficult to obtain and less accessible as a vehicle for wealth accumulation. Given the complex nature of the topic and the few countries with available data, caution should be exercised in generalising these trends and attributing them to potential drivers, including changing public policies, demographic shifts, and evolving access to mortgage credit, among others.

Homeownership rates have declined steadily over successive generations in a number of countries. Figure 2.15 and Figure 2.16 examines homeownership rates for several cohorts over their lifecycle in Australia, Southern Europe, the United Kingdom, and the United States, showing that each generation in these countries is generally less likely to own their homes at a given age than the previous generation. In Australia, for instance, average homeownership rates have decreased with each successive post-war generation. The differences between generational cohorts are greatest for households under 40 years of age, indicating a particularly large drop in access to housing for young people in this country. In the United Kingdom the homeownership rate at 25 years of age was 34% for those born in 1970-74, but fell to 16% for those born in 1985-89. In the United States, 69% of households born in 1940 owned their home at age 35, compared to 61% of those born in 1980. In the United Kingdom and the United States, homeownership rates have begun levelling off at lower levels than they have in the past, suggesting lower homeownership rates for younger generations in these countries may not be made up at later stages in their lifecycle. In Southern Europe, successive generations have lower homeownership rates than the previous generation, but given they are rising at a faster rate for the youngest generation, homeownership rates for the youngest cohort may still reach those of previous cohorts. The results show that a simple focus on average homeownership rates is misleading, as continued high levels of homeownership are partly due to property-owning older cohorts who are living longer.

Figure 2.15. Homeownership rates over the lifecycle for successive birth cohorts in Australia, Southern Europe, the United Kingdom and the United States
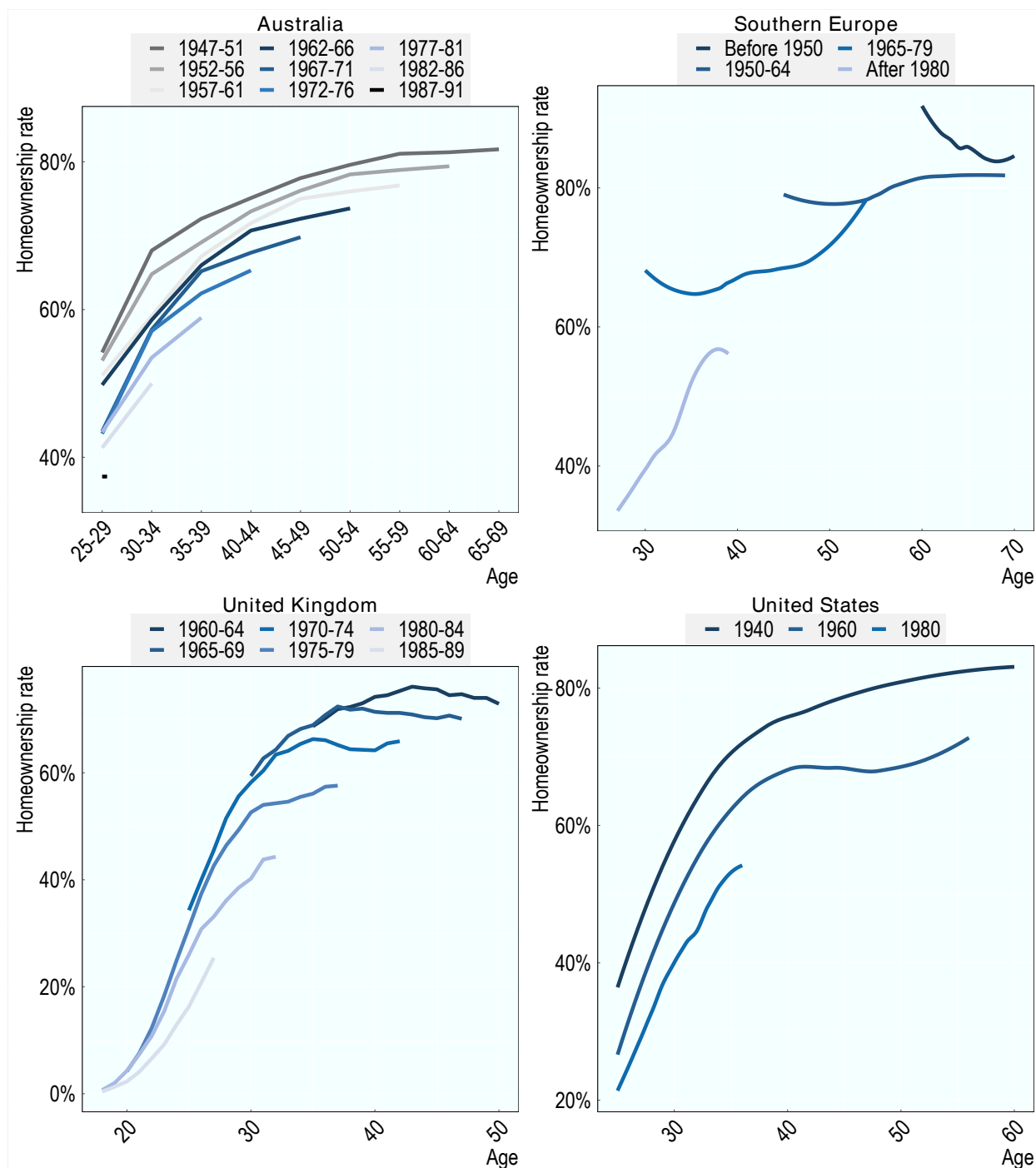

Note: The years in the legend refer to the birth years of each cohort. Southern Europe corresponds to a population-weighted average of Cyprus,[4], [5] Greece, Italy, Malta, Portugal, and Spain.
Source: The figure for Australia is taken from AIHW (2021[5]). The figures for Southern Europe and the United States are taken from Paz-Paredo (2022[6]). The figure for the United Kingdom is taken from Cribb, Hood, and Hoyle (2018[7]).

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The chance of becoming a homeowner may be increasingly dictated by household income and wealth in some countries. In France in 1973, homeownership rates were very similar for young households (aged 25 to 34) in the first three wealth quartiles. However, over the decades between 1973 and 2013, the gap between the top and bottom wealth quartiles of young households widened substantially (Figure 2.16), with the wealthiest households experiencing a significant increase in homeownership rates and the least wealthy experiencing a sharp decline. In Australia, the decline in homeownership rates between generations has been significantly more pronounced for bottom income households than for top income households (Figure 2.16). Between 1981 and 2016, homeownership rates for households aged 25-34 dropped by 40 percentage points for households in the first income quintile, compared to 7 percentage points for households in the top income quintile. Although the decrease in homeownership rates is smaller for older age groups, the size of the drop across generations remains much larger for households in the bottom income quintile compared to households in the top. For example, for 55-64 year old households, homeownership rates dropped by 16 percentage points in the first quintile and by 1 percentage point in the fifth quintile.

Figure 2.16. Evolution of homeownership rates among young households in France and working-age households in Australia, by income or wealth
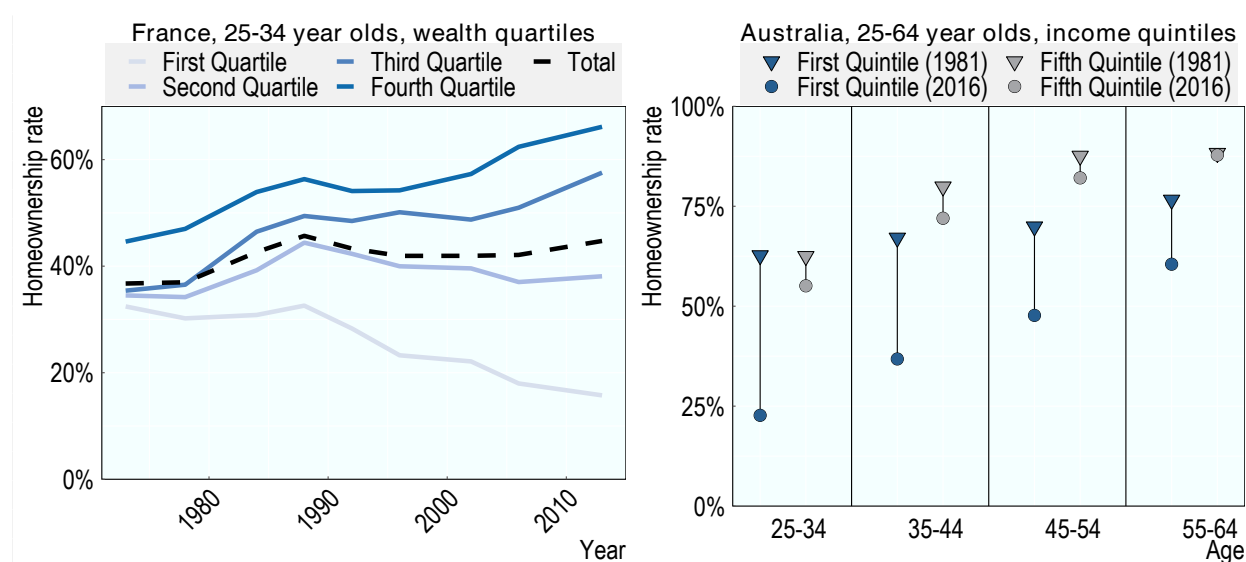
Note: The data for France are broken down by household wealth quartile, while the data for Australia are broken down into the top and bottom equivalised household income quintiles.
Source: The figure for France is taken from Bonnet, Garbinti, and Grobon (2018[8]). The figure for Australia is taken from Daley, Coates, and Wiltshire (2018[9]).

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These figures illustrate growing concerns about the homeownership prospects of younger generations in OECD countries, as homeownership rates decline and become increasingly reliant on income, wealth, and inheritances. These trends are in part driven by rising house prices and decreasing housing affordability (see Chapter 1), as well as by urbanisation and changing family structures. For example, Bonnet, Garbinti and Grobon (2018[8]) find fewer young households living in rural areas (where housing is generally more affordable) and fewer young low-wealth households with children (these households may have different preferences regarding homeownership or may be delaying having children until they can buy a home). The growing wealth and income divide among young people may be driven by rising mortgage debt, which requires high incomes to service, and by the growing importance of

financial assistance from families, which is concentrated among wealthy heirs (OECD (2021[10]), Bonnet, Garbinti and Grobon (2018[8])). While future generations are therefore likely to see continued drops in homeownership rates over time, households with high income, high wealth, and/or access to significant family resources may instead see rising homeownership rates or at least smaller declines. These findings are relevant for countries experiencing changing demography and rising house prices, but it is important to exercise caution in drawing lessons for other countries due to the limited sample of countries with available data.

2.5. Inheritances and housing

Gifts and inheritances likely play a key role in facilitating homeownership for some households, particularly among younger beneficiaries. Wealth transfers, in the form of either gifts received during the donor's life or inheritances after their death, can facilitate access to homeownership for some younger households, kick-starting wealth accumulation for the young people that benefit from these transfers. While wealth transfers may help young households put together a down payment, some households will instead inherit housing assets directly. Understanding the role of inheritances and gifts in accessing homeownership is important from an equity perspective and has important tax policy implications, in particular for the taxation of intergenerational wealth transfers.

In many OECD countries, there is a significant gap in homeownership rates between young households that have received a gift or inheritance and those that have not. Among 18 OECD countries, households aged 16-34 are far more likely to own their principal residence if they have benefited from a substantial gift[6] or inheritance (Figure 2.17). In most countries, the homeownership rate among young recipients of wealth transfers is roughly twice that of non-beneficiaries. The relative gap in homeownership is largest in Greece, where the homeownership rates for these two groups are 94% and 13%, respectively, and smallest in Lithuania, where the homeownership rate of beneficiaries (97%) is close to that of non-beneficiaries (83%). Receiving a gift or inheritance is likely to play a decisive role in facilitating homeownership among younger generations in countries where the relative gap in homeownership between heirs and non-heirs is large (e.g. Austria, Greece, Slovenia). On the other hand, Finland, Lithuania and the Slovak Republic have a much smaller gap in homeownership rates between young heirs and non-heirs, suggesting that these transfers are not a decisive factor in becoming a homeowner in these countries. In the future, rising house prices may make it more difficult for younger people to acquire housing without receiving external support, which could widen the homeownership gap between young households that have benefited from gifts or inheritances and those that have not, and increase intra-generational wealth inequality.

Figure 2.17. Homeownership rates for 16-34 year old households, recipients and non-recipients of a substantial gift or inheritance, 18 OECD countries

2017 or closest available year
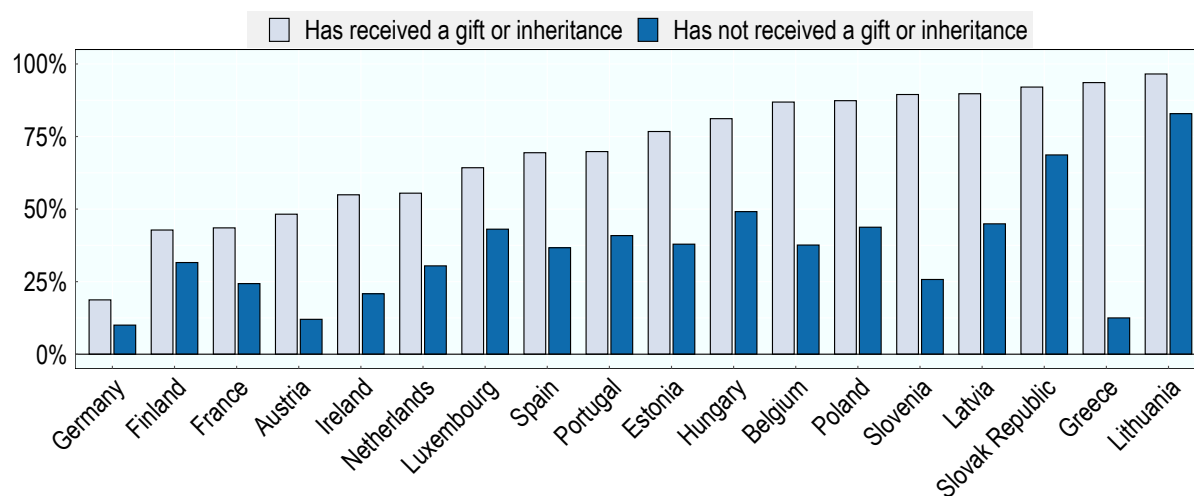
Note: The population-weighted average of each pair of bars is equal to the homeownership rate for 16-34 year old households in each country. Data on the prevalence of gifts and inheritances were not available for Italy.
Source: Eurosystem Household Finance and Consumption Survey.

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A majority of households that have received a gift or inheritance have received housing wealth, and many continue to live in that housing. Among recipients of wealth transfers, the share of households that received housing assets varies from 19% (the Netherlands) to 94% (Greece), and is higher than 50% in all but five countries (Figure 2.18). There are strong regional patterns, with high rates of housing transfers among beneficiaries in Eastern European countries and relatively low rates in Western Europe. The relatively high prevalence of housing transfers among recipients of gifts and inheritances reflects the key importance of housing in household wealth portfolios. In particular, given the high rates of homeownership among older populations, it follows that these households will frequently pass on housing assets to their descendants. Once housing is received as a gift or inheritance, households may sell or keep the asset, and those keeping it may choose to live in the residence or use it for other purposes. In countries such as Greece, Lithuania, and Slovenia, the vast majority of households that received inherited or gifted housing use it as their principal residence. In contrast, most beneficiaries of housing transfers in Belgium, France and Luxembourg use their inherited or gifted housing as a secondary residence or dispose of the housing. These differences may be partly due to mobility patterns across generations, as households may inherit housing that is far from their jobs in urban centres and that they are not able to use as a principal residence. Cross-country variations in family composition may also play a role, as inherited property will be more likely to have multiple recipients when families have several children and may therefore be sold to divide the value among recipients.

Figure 2.18. Share of wealth transfer recipients reporting inherited or gifted housing, 17 OECD countries

2017 or closest available year
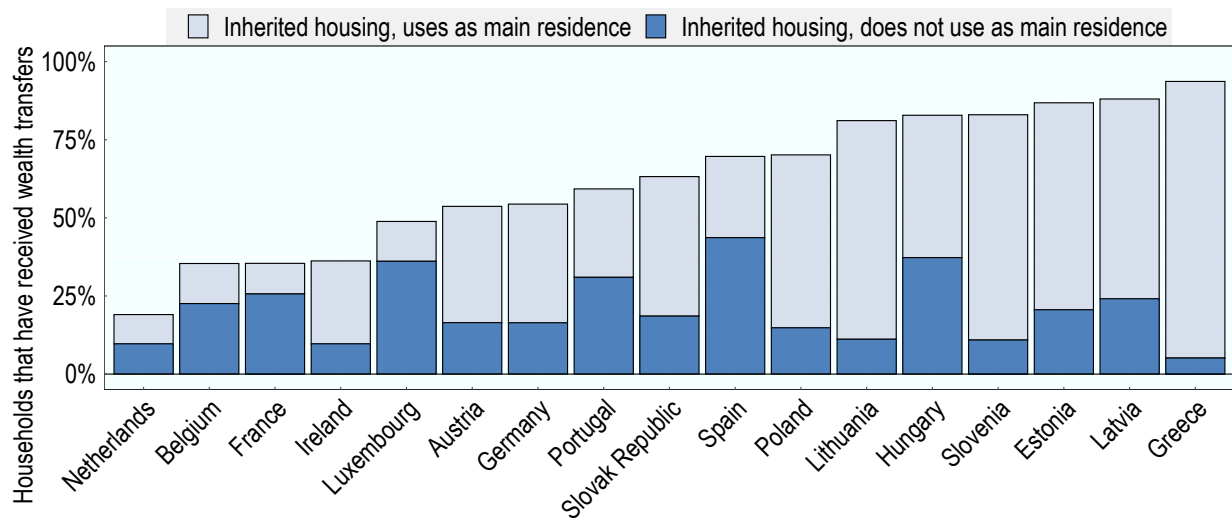
Note: Households that do not use inherited or gifted housing as their main residence may use it for other purposes or may have disposed of it. Data on inherited or gifted non-primary housing assets were not available for Finland. Data on the prevalence of gifts and inheritances were not available for Italy.
Source: Eurosystem Household Finance and Consumption Survey.

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Housing assets are usually inherited rather than gifted. On average in 19 OECD countries, roughly 75% of housing wealth transfers take the form of an inheritance, while roughly 25% take the form of a gift during the donor's life (Figure 2.19, left panel). This could reflect the fact that the donors intending to bequeath their primary residence will often maintain ownership of these assets until the end of their lives, but may also reflect more preferential taxation of inherited, compared to gifted, homes in some countries (OECD, 2021[10]). Gifts of housing assets may also be more limited to individuals who own secondary property or who use strategies such as trusts and the separation of bare ownership and usufruct to gift their main residence during their life.

Inherited owner-occupied housing wealth is highly concentrated among households at the top of the wealth distribution. On average among households that have inherited their principal residence,[7] over half of inherited owner-occupied housing wealth belongs to the top wealth quintile (Figure 2.19, right panel). In contrast, only 1% of inherited main residence housing wealth is held by households in the bottom 20% of the wealth distribution. This suggests that the tax treatment of inherited housing assets will have the largest impact on wealthy households and minimal consequences for households at the bottom of the wealth distribution. It is important to note, however, that this figure may underestimate inherited housing wealth as it does not account for households that do not live in or have sold inherited housing prior to the survey, and may overestimate inherited housing wealth where the value of the housing has increased since it was first received. In addition, households' position in the wealth distribution may have changed since they received the housing assets, as the data measure household wealth at the time of the survey and include the value of the gift or inheritance. These figures hold particular relevance for discussions on the tax treatment of inherited housing and can help to contextualise the distributional impacts of such policies.

Figure 2.19. Share of housing wealth by gift or inheritance and across net wealth quintiles, unweighted average, select OECD countries

2017 or closest available year
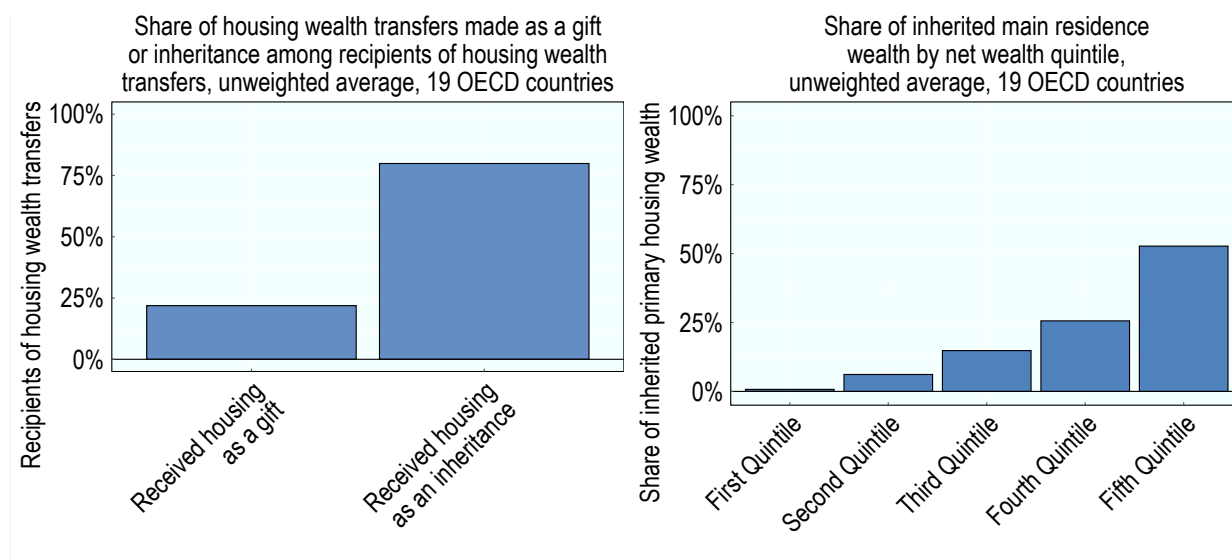
Note: Average of Austria, Belgium, Germany, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, Lithuania, Luxembourg, Latvia, Netherlands, Poland, Portugal, Slovenia, Slovak Republic, Spain. Left panel: Households who have received both inherited and gifted housing were counted in both categories; therefore, the two bars in this figure add up to slightly more than 100%. Right panel: Quintiles range from first (lowest) to fifth (highest). See Box 2.1 for a description of how quintiles are calculated.
Source: Eurosystem Household Finance and Consumption Survey.

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References

Advani, A., E. Chamberlain and A. Summers (2020), *Is it time for a UK wealth tax?*, https://www.ukwealth.tax/wealth-in-the-uk (accessed on 2 November 2021). [55]

Ahuja, A. and M. Nabar (2011), "Safeguarding Banks and Containing Property Booms: Cross-Country Evidence on Macroprudential Policies and Lessons From Hong Kong SAR", *IMF Working Papers*, No. WP/11/284, International Monetary Fund, https://ideas.repec.org/p/imf/imfwpa/2011-284.html (accessed on 2 November 2021). [42]

AIHW (2021), *Home ownership and housing tenure*, Australian Institute of Health and Welfare, https://www.aihw.gov.au/reports/australias-welfare/home-ownership-and-housing-tenure. [5]

Alpanda, S. and S. Zubairy (2016), "Housing and Tax Policy", *Journal of Money, Credit and Banking*, Vol. 48/2-3, pp. 485-512, https://doi.org/10.1111/JMCB.12307. [74]

Alsaïdi, I. et al. (2021), "Factors associated with SARS-CoV2 infection and care pathways among the most vulnerable populations living in Marseille: a case control study", *BMC Public Health*, Vol. 21/1704, pp. 1-14, https://doi.org/10.1186/S12889-021-11716-6. [17]

Alvaredo, F. et al. (2018), *World Inequality Report*, World Inequality Lab, Paris, France, http://www.wid.world/team. [4]

Andrews, D., A. Caldera Sánchez and Å. Johansson (2011), "Housing Markets and Structural Policies in OECD Countries", *OECD Economics Department Working Papers*, No. 836, OECD Publishing, Paris, https://doi.org/10.1787/5kgk8t2k9vf3-en. [112]

Andriopoulou, E. et al. (2020), "The distributional impact of recurrent immovable property taxation in Greece", pp. 506-526, https://doi.org/10.3326/pse.44.4.4. [24]

Arnold, J. et al. (2011), "Tax Policy for Economic Recovery and Growth", *The Economic Journal*, Vol. 121/550, pp. 59-80, https://doi.org/10.1111/J.1468-0297.2010.02415.X. [52]

Aroul, R., J. Hansz and J. Yang (2021), ""Fix it with Green:" The Valuation Impact of Green Retrofits on Residential Transaction Price", *Journal of Housing Research*, https://doi.org/10.1080/10527001.2021.1984755. [95]

Aroul, R., J. Hansz and J. Yang (2021), ""Fix it with Green:" The Valuation Impact of Green Retrofits on Residential Transaction Price", *Journal of Housing Research*, https://doi.org/10.1080/10527001.2021.1984755. [104]

Banzhaf, H. and N. Lavery (2010), "Can the land tax help curb urban sprawl? Evidence from growth patterns in Pennsylvania", *Journal of Urban Economics*, Vol. 67/2, pp. 169-179, https://doi.org/10.1016/j.jue.2009.08.005. [101]

Barakova, I. et al. (2003), "Does credit quality matter for homeownership?", *Journal of Housing Economics*, Vol. 12/4, pp. 318-336, https://doi.org/10.1016/J.JHE.2003.09.002. [61]

Barker, N. (2020), *The housing pandemic: four graphs showing the link between COVID-19 deaths and the housing crisis*, https://www.insidehousing.co.uk/insight/the-housing-pandemic-four-graphs-showing-the-link-between-covid-19-deaths-and-the-housing-crisis-66562?utm_source=Ocean%20Media%20Group&utm_medium=email&utm_campaign=11575108_IH-THE-FRIDAY-LONG-READ-29-5-2020-GR&dm_i=1HH2,6W3ES,WM2OTO,ROCH0,1 (accessed on 3 November 2021).   [18]

Baum-Snow, N. and J. Marion (2009), "The effects of low income housing tax credit developments on neighborhoods", *Journal of Public Economics*, Vol. 93/5-6, pp. 654-666, https://doi.org/10.1016/j.jpubeco.2009.01.001.   [84]

Berger, T. et al. (2000), "The Capitalization of Interest Subsidies: Evidence from Sweden", *Journal of Money, Credit and Banking*, Vol. 32/2, p. 217, https://doi.org/10.2307/2601239.   [66]

Besley, T., N. Meads and P. Surico (2014), "The incidence of transaction taxes: Evidence from a stamp duty holiday", *Journal of Public Economics*, Vol. 119, pp. 61-70, https://doi.org/10.1016/J.JPUBECO.2014.07.005.   [33]

Best, M. and H. Kleven (2018), "Housing Market Responses to Transaction Taxes: Evidence From Notches and Stimulus in the U.K.", *The Review of Economic Studies*, Vol. 85/1, pp. 157-193, https://doi.org/10.1093/RESTUD/RDX032.   [34]

Bonnet, C., B. Garbinti and S. Grobon (2018), "Rising inequalities in access to home ownership among young households in France, 1973-2013", *Economie et Statistique / Economics and Statistics* 500-501-502, pp. 117-138, https://doi.org/10.24187/ecostat.2018.500t.1948.   [8]

Borbely, D. (2021), "Limiting the distortionary effects of transaction taxes: Scottish stamp duty after the Mirrlees Review", *Fiscal Studies*, Vol. 42/2, pp. 265-290, https://doi.org/10.1111/1475-5890.12270.   [46]

Borenstein, S. and L. Davis (2016), "The Distributional Effects of US Clean Energy Tax Credits", *Tax Policy and the Economy*, Vol. 30/1, pp. 191-234, https://doi.org/10.1086/685597.   [91]

Bourassa, S. et al. (2013), "Mortgage Interest Deductions and Homeownership: An International Survey", *Swiss Finance Institute Research Papers*, No. 12-06, Swiss Finance Institute, https://doi.org/10.2139/SSRN.2002865.   [68]

Bowman, J. and M. Bell (2004), "Implications of a Split-Rate Real Property Tax: An Initial Look at Three Virginia Local Government Areas", Lincoln Institute of Land Policy, https://www.lincolninst.edu/sites/default/files/pubfiles/905_BowmanBell_PDF.pdf.   [130]

Brown, J. and D. Phillips (2010), "Tax and Benefit Reforms Under Labour", *2010 Election Briefing Note*, Institute for Fiscal Studies, https://doi.org/10.1920/bn.ifs.2010.0088.   [127]

Brys, B. et al. (2016), "Tax Design for Inclusive Economic Growth", *OECD Taxation Working Papers*, No. 26, OECD Publishing, Paris, https://doi.org/10.1787/5jlv74ggk0g7-en.   [117]

Caldera Sánchez, A. and D. Andrews (2011), "To Move or not to Move: What Drives Residential Mobility Rates in the OECD?", *OECD Economics Department Working Papers*, No. 846, OECD Publishing, Paris, https://doi.org/10.1787/5kghtc7kzx21-en.   [113]

Carasso, A., C. Steuerle and E. Bell (2005), "How to Better Encourage Homeownership", *Tax Policy Issues and Options*, No. 12, Urban Brookings Tax Policy Center, http://www.taxpolicycenter.org/TaxModel/income.cfm. (accessed on 3 November 2021).   [70]

Carozzi, F., C. Hilber and X. Yu (2020), "On the economic impacts of mortgage credit expansion policies: evidence from help to buy", *CEP Discussion Papers*, No. 1681, Centre for Economic Performance, LSE, https://ideas.repec.org/p/cep/cepdps/dp1681.html (accessed on 3 November 2021).   [81]

Causa, O. and J. Pichelmann (2020), *Should I stay or should I go? Housing and residential mobility across OECD countries*, OECD Publishing, Paris, https://doi.org/10.1787/acf95e90-en.   [108]

Causa, O., N. Woloszko and D. Leite (2019), "Housing, wealth accumulation and wealth distribution: Evidence and stylized facts", *OECD Economics Department Working Papers*, No. 1588, OECD Publishing, Paris, https://doi.org/10.1787/86954c10-en.   [2]

Chapelle, G., B. Vignolles and C. Wolf (2018), "Impact of a housing tax credit on local housing markets: Evidence from France", *Annals of Economics and Statistics* 130, pp. 101-131, https://doi.org/10.15609/annaeconstat2009.130.0101.   [83]

Charlier, D., A. Risch and C. Salmon (2018), "Energy Burden Alleviation and Greenhouse Gas Emissions Reduction: Can We Reach Two Objectives With One Policy?", *Ecological Economics*, Vol. 143, pp. 294-313, https://doi.org/10.1016/j.ecolecon.2017.07.002.   [92]

Chawla, R. and W. Ted (2003), *Property taxes*, Statistics Canada, https://www150.statcan.gc.ca/n1/en/catalogue/75-001-X200310713094 (accessed on 2 November 2021).   [23]

Clerc, M., A. Mauroux and V. Marcus (2010), *Le recours au crédit d'impôt en faveur du développement durable*, Insee Première, Paris, France.   [93]

Cohen, J. and C. Coughlin (2005), "An Introduction to Two-Rate Taxation of Land and Buildings", *Federal Reserve Bank of St. Louis Review*, Vol. 87/3, pp. 359-374, https://doi.org/10.20955/r.87.359-374.   [126]

Cribb, J. and P. Simpson (2018), "Barriers to homeownership for young adults", in Emmerson, C., C. Farquharson and P. Johnson (eds.), *The IFS Green Budget 2021*, Institute for Fiscal Studies, London, https://ifs.org.uk/green-budget/2018 (accessed on 3 November 2021).   [63]

Crowe, C. et al. (2011), "How to Deal with Real Estate Booms: Lessons from Country Experiences", *IMF Working Paper*, No. WP/11/91, International Monetary Fund, https://doi.org/10.5089/9781455253302.001.A001.   [44]

Cunningham, C. and G. Engelhardt (2008), "Housing capital-gains taxation and homeowner mobility: Evidence from the Taxpayer Relief Act of 1997", *Journal of Urban Economics*, Vol. 63/3, pp. 803-815, https://doi.org/10.1016/J.JUE.2007.05.002.   [49]

Dachis, B., G. Duranton and M. Turner (2012), "The effects of land transfer taxes on real estate markets: evidence from a natural experiment in Toronto", *Journal of Economic Geography*, Vol. 12, pp. 327-354, https://doi.org/10.1093/jeg/lbr007.   [35]

Daley, J., B. Coates and T. Wiltshire (2018), *Housing affordability: re-imagining the Australian dream*, Grattan Institute.   [9]

Dam, N. et al. (2011), "The Housing Bubble that Burst: Can House Prices be Explained? And Can Their Fluctuations be Dampened?", *Monetary Review*, Nationalbank Denmark, Copenhagen. [28]

Davis, C. et al. (2009), "Who Pays? A Distributional Analysis of the Tax Systems in All 50 States 3rd Edition Institute on Taxation and Economic Policy", Institute on Taxation and Economic Policy, http://www.itepnet.org (accessed on 2 November 2021). [22]

Davis, M. (2019), "The Distributional Impact of Mortgage Interest Subsidies: Evidence from Variation in State Tax Policies", *Job Market Paper*, The Wharton School, University of Pennsylvania. [69]

Deniau, F. et al. (2019), *Évaluation du dispositif d'aide fiscale à l'investissement locatif Pinel*, Inspection générale des finances, Paris, France. [87]

Di Maggio, M. and A. Kermani (2016), "Credit-Induced Boom and Bust", *The Review of Financial Studies*, https://doi.org/10.2139/SSRN.2463516. [78]

Diamond, P. and J. Mirrlees (1971), "Optimal Taxation and Public Production I: Production Efficiency", *The American Economic Review*, Vol. 61/1, pp. 8-27, https://www.jstor.org/stable/1910538?seq=1#metadata_info_tab_contents (accessed on 2 November 2021). [32]

Duca, J., J. Muellbauer and A. Murphy (2011), "House Prices and Credit Constraints: Making Sense of the US Experience", *The Economic Journal*, Vol. 121/552, pp. 533-551, https://doi.org/10.1111/J.1468-0297.2011.02424.X. [77]

Economidou, M. et al. (2020), "Review of 50 years of EU energy efficiency policies for buildings", *Energy and Buildings*, Vol. 225, https://doi.org/10.1016/j.enbuild.2020.110322. [89]

Eriksen, M. and S. Rosenthal (2010), "Crowd out effects of place-based subsidized rental housing: New evidence from the LIHTC program", *Journal of Public Economics*, Vol. 94/11-12, https://doi.org/10.1016/j.jpubeco.2010.07.002. [82]

European Commission (2012), "Possible reforms of real estate taxation: Criteria for successful policies", *Occasional Papers*, No. 119, European Commission, Brussels, https://doi.org/10.2765/24556. [27]

Fatica, S. (2015), "Housing taxation: from micro design to macro impact", *Quaterly Report on the Euro Area*, No. 14(1), Directorate General Economic and Financial Affairs - European Commission, https://ideas.repec.org/a/euf/qreuro/0141-03.html (accessed on 3 November 2021). [72]

Fatica, S. and D. Prammer (2017), "Housing and the tax system: how large are the distortions in the euro area?", *ECB Working Paper*, No. 2087, European Central Bank, https://doi.org/10.2866/456421. [51]

Favara, G. and J. Imbs (2015), "Credit Supply and the Price of Housing", *American Economic Review*, Vol. 105/3, pp. 958-92, https://doi.org/10.1257/AER.20121416. [80]

Fitzgerald, K. (2020), *Speculative Vacancies 10: A Persistent Puzzle*, Prosper Australia, Melbourne, Victoria, https://www.prosper.org.au/2020/12/the-persistent-puzzle-speculative-vacancies-10/. [128]

Floetotto, M., M. Kirker and J. Stroebel (2016), "Government intervention in the housing market: Who wins, who loses?", *Journal of Monetary Economics*, Vol. 80, pp. 106-123, https://doi.org/10.1016/J.JMONECO.2016.04.005. [75]

Gabriel, S. and S. Rosenthal (1991), "Credit rationing, race, and the mortgage market", *Journal of Urban Economics*, Vol. 29/3, pp. 371-379, https://doi.org/10.1016/0094-1190(91)90007-T. [62]

Gale, W., J. Gruber and S. Stephens-Davidowitz (2007), "Encouraging Homeownership Through the Tax Code", *Tax Notes*, No. Vol.115, No.12, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1758888 (accessed on 3 November 2021). [60]

Gbohoui, W., W. Lam and V. Lledo (2019), "The Great Divide: Regional Inequality and Fiscal Policy by William Gbohoui, W. Raphael Lam, Victor Lledo", *88*, No. 19, IMF, https://ssrn.com/abstract=3417725 (accessed on 2 November 2021). [16]

Giraudet, L., C. Bourgeois and P. Quirion (2021), "Policies for low-carbon and affordable home heating: A French outlook", *Energy Policy*, Vol. 151, https://doi.org/10.1016/j.enpol.2021.112140. [94]

Glaeser, E. and J. Gyourko (2002), "The Impact of Zoning on Housing Affordability", No. w8835, National Bureau of Economic Research, Cambridge, MA, https://doi.org/10.3386/w8835. [88]

Glaeser, E. and J. Shapiro (2003), "The Benefits of the Home Mortage Interest Deduction", in Porterba, J. (ed.), *Tax Policy and the Economy*, MIT Press, http://www.nber.org/chapters/c11534 (accessed on 2 November 2021). [13]

Goldstein, D. et al. (2012), *A Retrospective Look at Federal Energy Efficiency Tax Incentives: How Do Cost and Performance-Based Incentives Compare in Their Ability to Transform Markets?*, ACEEE Summer Study on Energy Efficiency in Buildings. [97]

Goode, R. (1960), "Imputed rent of owner-occupied dwellings under income tax", *The Journal of Finance*, Vol. 15/4, pp. 504-530, https://doi.org/10.1111/J.1540-6261.1960.TB02766.X. [58]

Goodman, L. and C. Mayer (2018), "Homeownership and the American Dream", *Journal of Economic Perspectives*, Vol. 32/1, pp. 31-58, https://doi.org/10.1257/JEP.32.1.31. [11]

Green, R., P. Hendershott and D. Capozza (1996), "Taxes, Mortgage Borrowing and House Prices", *Wisconsin-Madison CULER working papers*, No. 96-06, Center for Urban Land Economic Research, Wisconsin, https://ideas.repec.org/p/wop/wisule/96-06.html (accessed on 3 November 2021). [59]

Gruber, J., A. Jensen and H. Kleven (2021), "Do People Respond to the Mortgage Interest Deduction? Quasi-experimental Evidence from Denmark", *American Economic Journal: Economic Policy*, Vol. 13/2, pp. 273-303, https://doi.org/10.1257/POL.20170366. [64]

Grudnoff, M. (2016), "CGT main residence exemption Why removing the tax concession for homes over $2 million is good for the budget, the economy and fairness", The Australia Institute, https://www.tai.org.au (accessed on 2 November 2021). [54]

Haider, M., A. Anwar and C. Holmes (2016), "Did the Land Transfer Tax Reduce Housing Sales in Toronto?", *IMFG Papers*, No. 28, Institute on Municipal Finance & Governance, http://munkschool.utoronto.ca/imfg/ (accessed on 2 November 2021). [37]

Harris, B. (2010), *The Effect of Proposed Tax Reforms on Metropolitan Housing Prices*, Tax Policy Center - Urban Institute and Brookings Institute.

[67]

Harris, B. and L. Parker (2014), *The Mortgage Interest Deduction Across Zip Codes*, Brookings, https://www.brookings.edu/research/the-mortgage-interest-deduction-across-zip-codes/ (accessed on 3 November 2021).

[71]

Hartzok, A. (1997), "Pennsylvania's Success with Local Property Tax Reform", *American Journal of Economics and Sociology*, Vol. 56/2, https://doi.org/10.1111/j.1536-7150.1997.tb03461.x.

[102]

Hilber, C. and T. Lyytikäinen (2017), "Transfer taxes and household mobility: Distortion on the housing or labor market?", *Journal of Urban Economics*, Vol. 101, https://doi.org/10.1016/j.jue.2017.06.002.

[38]

Hilber, C. and T. Turner (2014), "The mortgage interest deduction and its impact on homeownership decisions", *Review of Economics and Statistics*, Vol. 96/4, pp. 618-637, https://doi.org/10.1162/REST_A_00427.

[65]

Hodge, T. et al. (2017), "Assessment Inequity in a Declining Housing Market: The Case of Detroit", *Real Estate Economics*, Vol. 45/2, pp. 237-258, https://doi.org/10.1111/1540-6229.12126.

[25]

Hood, A., J. Hoyle and J. Cribb (2018), *The decline of homeownership among young adults*, Institute for Fiscal Studies, https://doi.org/10.1920/BN.IFS.2018.BN0224.

[7]

Housing Vancouver (2020), *Empty Homes Tax Annual Report*, City of Vancouver, Vancouver, British Colombia, https://vancouver.ca/files/cov/vancouver-2021-empty-homes-tax-annual-report.pdf.

[129]

Hui, E., J. Zhong and K. Yu (2017), "Property prices, housing policies for collateral and resale constraints", *International Journal of Strategic Property Management*, Vol. 21/2, pp. 115-128, https://doi.org/10.3846/1648715X.2016.1249984.

[41]

Hungerford, T. (2011), *Changes in the Distribution of Income Among Tax Filers Between 1996 and 2006: The Role of Labor Income, Capital Income, and Tax Policy*, Congressional Research Service, http://www.crs.gov (accessed on 2 November 2021).

[53]

Johansson, Å. et al. (2008), "Taxation and Economic Growth", *OECD Economics Department Working Papers*, No. 620, OECD Publishing, Paris, https://doi.org/10.1787/241216205486.

[111]

Joumard, I., M. Pisu and D. Bloch (2012), "Tackling income inequality: The role of taxes and transfers", *OECD Journal: Economic Studies*, https://doi.org/10.1787/eco_studies-2012-5k95xd6l65lt.

[119]

Karlman, M., K. Kinnerud and K. Kragh-Sørensen (2021), "Costly reversals of bad policies: The case of the mortgage interest deduction", *Review of Economic Dynamics*, Vol. 40, pp. 85-107, https://doi.org/10.1016/J.RED.2020.08.003.

[76]

Katagiri, M. and C. Raddatz (2018), "House Price Synchronization and Financial Openness: A Dynamic Factor Model Approach", *IMF Working Papers*, IMF, https://doi.org/10.5089/9781484378243.001.A001.

[15]

Kim, K. and P. Lambert (2008), "Redistributive Effect of U.S. Taxes and Public Transfers, 1994-2004:", *http://dx.doi.org/10.1177/1091142108324423*, Vol. 37/1, pp. 3-26, https://doi.org/10.1177/1091142108324423. [21]

Knoll, K., M. Schularick and T. Steger (2017), "No Price Like Home: Global House Prices, 1870-2012", *American Economic Review*, Vol. 107/2, p. 353, https://doi.org/10.1257/AER.20150501. [14]

Kuttner, K. and I. Shim (2013), "Can Non-Interest Rate Policies Stabilize Housing Markets? Evidence from a Panel of 57 Economies", *NBER Working Paper Series*, No. 19723, National Bureau of Economic Research, Cambridge, MA, https://doi.org/10.3386/W19723. [47]

Kwak, S. and J. Mak (2011), "Political Economy of Property Tax Reform: Hawaii's Experiment with Split-Rate Property Taxation", *American Journal of Economics and Sociology*, Vol. 70/1, https://doi.org/10.1111/j.1536-7150.2010.00761.x. [103]

Malakellis, M. and M. Warlters (2021), "The economic costs of transfer duty: a literature review", *Treasury Technical Research Paper Series*, No. 21-08, NSW Government. [45]

Matsaganis, M. and M. Flevotomou (2007), "The impact of mortgage interest tax relief in the Netherlands, Sweden, Finland, Italy and Greece", *EUROMOD Working Papers*, No. EM2/07, Institute for Social and Economic Research, https://ideas.repec.org/p/ese/emodwp/em2-07.html (accessed on 3 November 2021). [73]

McClure, K. (2019), "What Should Be the Future of the Low-Income Housing Tax Credit Program?", *Housing Policy Debate*, Vol. 29/1, pp. 65-81, https://doi.org/10.1080/10511482.2018.1469526. [86]

McMillen, D. and R. Singh (2020), "Assessment Regressivity and Property Taxation", *Journal of Real Estate Finance and Economics*, Vol. 60/1-2, pp. 155-169, https://doi.org/10.1007/S11146-019-09715-X. [26]

Mecca, U. et al. (2020), "How Energy Retrofit Maintenance Affects Residential Buildings Market Value?", *Sustainability*, Vol. 12/12, https://doi.org/10.3390/su12125213. [96]

Mian, A. and A. Sufi (2009), "The Consequences of Mortgage Credit Expansion: Evidence from the U.S. Mortgage Default Crisis", *The Quarterly Journal of Economics*, Vol. 124/4, pp. 1449-1496, https://doi.org/10.1162/QJEC.2009.124.4.1449. [79]

Mirrlees, J. et al. (2011), "The Taxation of Land and Property", in *Tax by design*, Oxford University Press, Oxford. [12]

New Zealand Treasury (2021), *Tax, Housing and RBNZ Information Release*, New Zealand Treasury, https://treasury.govt.nz/publications/information-release/tax-and-housing. [100]

Norregaard, J., V. Perry and M. Keen (2013), *Taxing Immovable Property Revenue Potential and Implementation Challenges; by John Norregaard; IMF Working Paper 13/129; May 1, 2013.* [31]

O'Connor, B. et al. (2015), "Searching for the inclusive growth tax grail: The distributional impact of growth enhancing tax reform in Ireland", *OECD Economics Department Working Papers*, No. 1270, OECD Publishing, Paris, https://doi.org/10.1787/5jrqc6vk3n30-en. [116]

OECD (2021), *Brick by Brick: Building Better Housing Policies*, OECD Publishing, Paris, https://doi.org/10.1787/b453b043-en. [109]

OECD (2021), *Building for a Better Tomorrow: Policies to Make Housing more Affordable*, OECD Publishing, Paris, https://doi.org/10.1787/5d9127d4-en. [105]

OECD (2021), *Inheritance Taxation in OECD Countries*, OECD Tax Policy Studies, No. 28, OECD Publishing, Paris, https://doi.org/10.1787/e2879a7d-en. [10]

OECD (2021), *Making Property Tax Reform in China Happen: A Review on Best Practices in Property Tax Design and Reforms in OECD Countries*, OECD Publishing (forthcoming), Paris. [19]

OECD (2021), "Measuring effective taxation of housing: Building the foundations for policy reform"*, OECD Tax Policy Analysis and Tax Statistics (forthcoming)*, OECD, Paris. [40]

OECD (2021), *OECD Economic Surveys: Netherlands 2021*, OECD Publishing, Paris, https://doi.org/10.1787/dd476bd3-en. [110]

OECD (2021), *OECD Secretary-General Tax Report to G20 Finance Ministers and Central Bank Governors, Italy*, OECD, Paris, http://www.oecd.org/tax/oecd-secretary-general-tax-report-g20-finance-ministers-october-2021.pdf (accessed on 3 November 2021). [20]

OECD (2021), "Tax relief for homeownership"*, OECD Affordable Housing Database*, No. PH2.2, OECD, Paris, https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwi3pr2s9fzzAhWKxIUKHV6LBj0QFnoECBAQAQ&url=https%3A%2F%2Fwww.oecd.org%2Fels%2Ffamily%2FPH2-1-Public-spending-support-to-home-buyers.pdf&usg=AOvVaw1UZS7T07XIzewV6VjtDA6p (accessed on 3 November 2021). [56]

OECD (2020), *How's Life? 2020: Measuring Well-being*, OECD Publishing, Paris, https://doi.org/10.1787/9870c393-en. [3]

OECD (2020), *Revenue Statistics 2020*, OECD Publishing, Paris, https://doi.org/10.1787/8625f8e5-en. [107]

OECD (2019), *OECD Economic Surveys: Denmark 2019*, OECD Publishing, Paris, https://doi.org/10.1787/eco_surveys-dnk-2019-en. [125]

OECD (2018), *OECD Tax Policy Studies*, OECD Publishing, Paris, https://doi.org/10.1787/19900538. [1]

OECD (2018), *Rethinking Urban Sprawl: Moving Towards Sustainable Cities*, OECD Publishing, Paris, https://doi.org/10.1787/9789264189881-en. [123]

OECD (2018), *Taxation of Household Savings*, OECD Tax Policy Studies, No. 25, OECD Publishing, Paris, https://doi.org/10.1787/9789264289536-en. [124]

OECD (2016), *OECD Economic Surveys: Netherlands 2016*, OECD Publishing, Paris, https://doi.org/10.1787/eco_surveys-nld-2016-en. [122]

OECD (2014), *OECD Economic Surveys: Australia 2014*, OECD Publishing, Paris, https://doi.org/10.1787/eco_surveys-aus-2014-en. [121]

OECD (2014), *OECD Economic Surveys: Netherlands 2014*, OECD Publishing, Paris, https://doi.org/10.1787/eco_surveys-nld-2014-en. [120]

Palameta, B. and I. Macredie (2005), "Property taxes relative to income", *Perspectives*, No. 75-001-XIE, Statistics Canada, https://www150.statcan.gc.ca/n1/en/pub/75-001-x/10305/7796-eng.pdf?st=PNhrj3nA (accessed on 2 November 2021). [132]

Paz-Pardo, G. (2022), *Younger generations and the lost dream of home ownership*, European Central Bank, https://www.ecb.europa.eu/pub/economic-research/resbull/2022/html/ecb.rb220126~4542d3cea0.en.html#:~:text=Decreasing%20home ownership%20rates&text=Among%20households%20headed%20up%20by,millennials%E2% 80%9D%20born%20in%20the%201980s. [6]

Petkova, K. and A. Weichenrieder (2017), "Price and Quantity Effects of the German Real Estate Transfer Tax", *WU International Taxation Research Paper Series*, No. 2, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2988888 (accessed on 2 November 2021). [39]

Poghosyan, T. (2016), "Can Property Taxes Reduce House Price Volatility? Evidence from U.S. Regions", *IMF Working Paper*, No. WP/16/216, International Monetary Fund, https://doi.org/10.5089/9781475552799.001. [43]

Poterba, J., S. Venti and D. Wise (2011), "The Composition and Draw-down of Wealth in Retirement", *NBER Working Paper Series*, No. 17536, National Bureau for Economic Research, https://doi.org/10.3386/W17536. [48]

Risch, A. (2020), "Are environmental fiscal incentives effective in inducing energy-saving renovations? An econometric evaluation of the French energy tax credit", *Energy Economics*, Vol. 90, https://doi.org/10.1016/j.eneco.2020.104831. [90]

Segú, M. (2020), "The impact of taxing vacancy on housing markets: Evidence from France", *Journal of Public Economics*, Vol. 185, p. 104079, https://doi.org/10.1016/j.jpubeco.2019.104079. [99]

Shan, H. (2011), "The Effect of Capital Gains Taxation on Home Sales: Evidence from the Taxpayer Relief Act of 1997", *Journal of Public Economics*, Vol. 95, p. 188, https://doi.org/10.1016/J.JPUBECO.2010.10.006. [50]

Sinai, T. and J. Waldfogel (2005), "Do low-income housing subsidies increase the occupied housing stock?", *Journal of Public Economics*, Vol. 89/11-12, pp. 2137-2164, https://doi.org/10.1016/j.jpubeco.2004.06.015. [85]

Slack, E. and R. Bird (2015), "How to Reform the Property Tax: Lessons from around the World", *IMFG Papers*, No. 21, Institute of Municipal Finance and Governance, http://munkschool.utoronto.ca/imfg/ (accessed on 2 November 2021). [30]

Slack, E. and R. Bird (2014), "The Political Economy of Property Tax Reform", *OECD Working Papers on Fiscal Federalism*, No. 18, OECD Publishing, Paris, https://doi.org/10.1787/5jz5pzvzv6r7-en. [115]

Slemrod, J., C. Weber and H. Shan (2017), "The behavioral response to housing transfer taxes: Evidence from a notched change in D.C. policy", *Journal of Urban Economics*, Vol. 100, pp. 137-153, https://doi.org/10.1016/J.JUE.2017.05.005. [36]

Smidova, Z. (2016), "Betting the house in Denmark", *OECD Economics Department Working Papers*, No. 1337, OECD Publishing, Paris, https://doi.org/10.1787/5jln042vd3kk-en. [118]

Sommer, K. and P. Sullivan (2018), "Implications of US Tax Policy for House Prices, Rents, and Homeownership", *American Economic Review*, Vol. 108/2, p. 274, https://doi.org/10.1257/AER.20141751. [57]

Sutherland, D. and P. Hoeller (2012), "Debt and Macroeconomic Stability: An Overview of the Literature and Some Empirics", *OECD Economics Department Working Papers*, No. 1006, OECD Publishing, Paris, https://doi.org/10.1787/5k8xb75txzf5-en. [114]

Thomas, A. (2021), "Reforming the taxation of housing in Israel", *OECD Taxation Working Papers*, No. 53, OECD Publishing, Paris, https://doi.org/10.1787/83fd48ad-en. [106]

Tobias, L. (2008), *Toward Sustainable Financing and Strong Markets for Green Building: US Green Building Finance Review*, Commission for Environmental Cooperation, Montréal, Quebec, http://www.usgbc.org/News/PressReleaseDetails.aspx?ID=3124. [98]

UNECE (2011), *Canberra Handbook on Household Income Statistics*, United Nations Economic Comission for Europe, Geneva, https://unece.org/fileadmin/DAM/stats/groups/cgh/Canbera_Handbook_2011_WEB.pdf. [131]

Waldhart, P. and A. Reschovsky (2012), "Property tax delinquency and the number of payment installments", *Public Finance and Management*, Lincoln Institute of Land Policy, https://www.researchgate.net/publication/313050824_Property_tax_delinquency_and_the_number_of_payment_installments (accessed on 2 November 2021). [29]

Notes

[1] Secondary real estate does not refer exclusively to housing and encompasses real estate assets held at the household level that are not the primary residence of the owner. This includes second and holiday homes, investment real estate, and farmland.

[2] The sample only includes households that report holding mortgage debt on their primary residence. Limiting the analysis to these households removes the population of low-income retirees that have finished paying off their mortgage, and who therefore significantly reduce average housing liabilities in the bottom quintile.

[3] The household head corresponds to the reference person of the household as defined in the Canberra Group Handbook on Household Income Statistics. Specifically, it refers to "a person aged 15 years or over selected to represent the household based on a set of selection criteria related to home ownership, couple or parental status, income and/or age" (UNECE (2011[131])).

[4] Note by Türkiye: The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Islands. Türkiye recognizes the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Türkiye shall preserve its position concerning the "Cyprus issue".

[5] Note by all the European Union Member States of the OECD and the European Commission: The Republic of Cyprus is recognized by all members of the United Nations with the exception of Türkiye. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

[6] According to the HFCS survey, a substantial gift refers to a gift that has made a significant impact on the financial situation of the household (see:)

[7] This analysis is limited to homeowners that are currently living in housing they received as a gift or inheritance, as housing values are the most up-to-date for this group. Future work could draw on detailed multi-country house price indexes to incorporate inherited non owner-occupied housing. The wealth quintiles correspond to levels of household wealth at the time of the survey, which includes the values of the gifted or inherited housing assets under consideration.

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