

## HC1.2. HOUSING COSTS OVER INCOME

### Definitions and methodology

Housing costs can be a substantial financial burden to households, especially for low-income households. The median of the ratio of housing cost over income gives an indication of the financial pressure that households face due to housing costs. Another common measure for housing affordability used here is the “housing cost overburden rate”, which measures the proportion of households or population that spend more than 40% (following Eurostat methodology) of their disposable income on housing cost. For policy measures aiming to support households with housing costs refer to indicators PH2, PH3, and PH4.

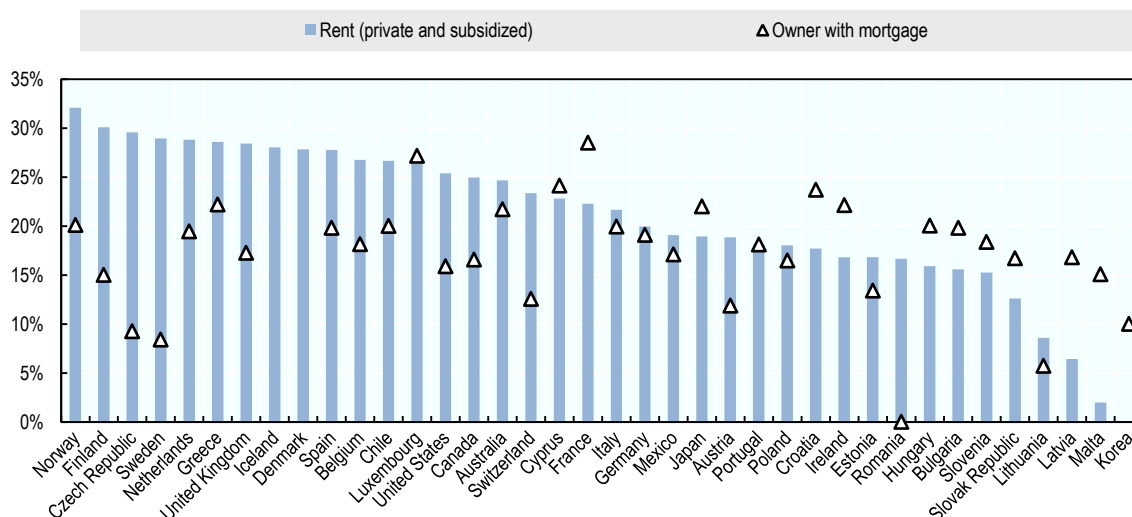
Housing costs can refer to: (1) a narrow definition based on rent and mortgage costs (principal repayment and mortgage interest); or (2), a wider definition that also includes costs of mandatory services and charges, regular maintenance and repair, taxes and utilities, also referred to as “total housing costs” below. The data presented here are based on household survey microdata and concern national household or population level data.

### Key findings

In most countries median housing costs – narrow definition - are higher for tenant households than for owner households with a mortgage relative to households' income (see Figure HC1.2.1 and online Annex HC1.2.A1 for earlier years). Outright owners are not considered here as they do not face mortgage costs (refer to Figure HC1.2.4 and the discussion below on housing cost burden in a wider definition which also considers the burden on outright owners). The median burden of rent payments for tenant households is highest in Norway (32.1%) and lowest for Central and Eastern European countries, Ireland and Malta (below 20%).

**Figure HC1.2.1: Households' housing cost burden (mortgage and rent cost) as a share of disposable income, 2014 or latest year available**

Median of the mortgage burden (principal repayment and interest payments) or rent burden (private market and subsidized rent) as a share of disposable income, in percent <sup>1 2</sup>



1. In Chile, Mexico, Korea and the United States gross income instead of disposable income is used due to data limitations. No data on mortgage principal repayments available for Denmark due to data limitations.

2. Results only shown if category composed of at least 30 observations.

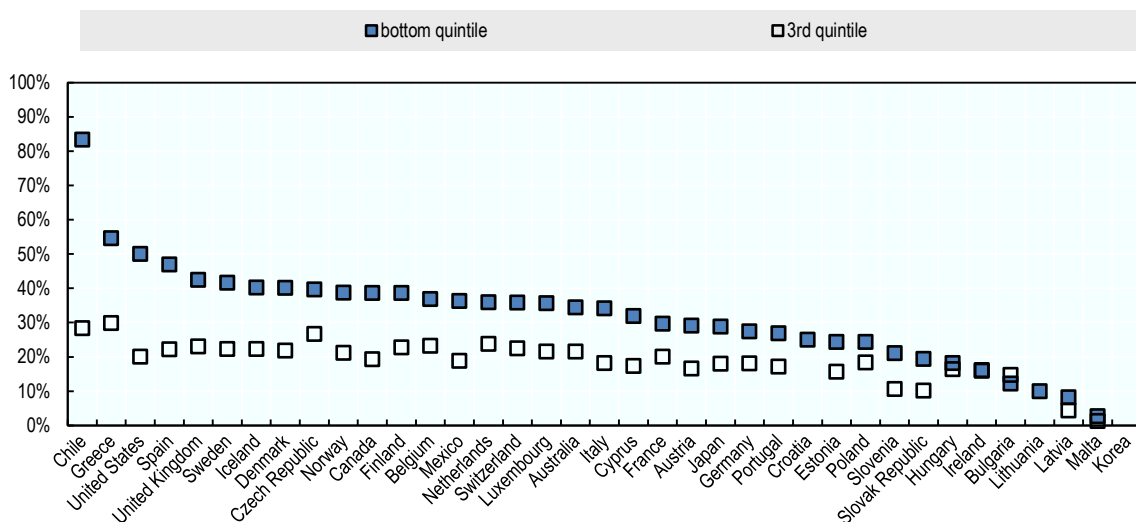
a) Note by Turkey: The information in this document with reference to “Cyprus” relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and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

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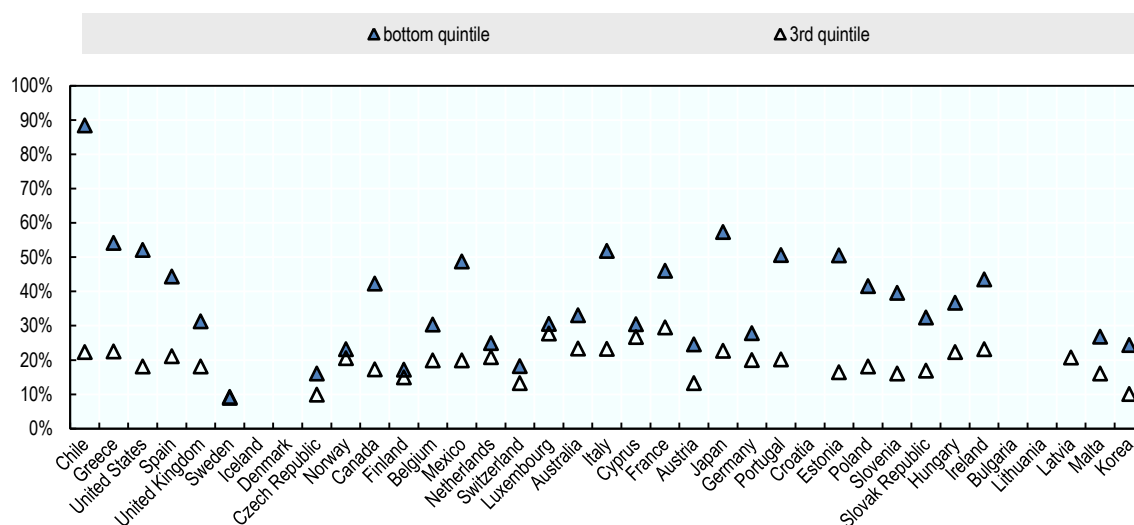
Source: OECD calculations based on European Survey on Income and Living Conditions (EU SILC) 2014 except Germany; the Household, Income and Labour Dynamics Survey (HILDA) for Australia (2014); the Survey of Labour and Income Dynamics (SLID) for Canada (2011); Encuesta de Caracterización Socioeconómica Nacional (CASEN) for Chile (2013); the German Socioeconomic Panel (GSOEP) for Germany (2014); the Korean Housing Survey (2014); Japan Household Panel Study (JHPS) for Japan (2014); Encuesta Nacional de Ingresos y Gastos de los Hogares (ENIGH) for Mexico (2014); American Community Survey (ACS) for the United States (2014).

**HC1.2.2. Housing cost burden of low- and middle income households as share of disposable income, 2014 or latest year available**

Panel A: Median of rent burden (private market and subsidized rent) as a share of disposable income in the bottom and the third quintile of the income distribution <sup>1 2</sup>



Panel B: Median of mortgage burden (principal repayment and interest payments) as a share of disposable income in the bottom and the third quintile of the income distribution <sup>1 2</sup>



1. In Chile, Mexico, Korea and the United States gross income instead of disposable income is used due to data limitations.

2. Results only shown if data available for at least 30 observations in bottom quintile.

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Source: OECD calculations based on European Survey on Income and Living Conditions (EU SILC) 2014 except Germany; the Household, Income and Labour Dynamics Survey (HILDA) for Australia (2014); the Survey of Labour and Income Dynamics (SLID) for Canada (2011); Encuesta de Caracterización Socioeconómica Nacional (CASEN) for Chile (2013); the German Socioeconomic Panel (GSOEP) for Germany (2014); the Korean Housing Survey (2014); Japan Household Panel Study (JHPS) for Japan (2014); Encuesta Nacional de Ingresos y Gastos de los Hogares (ENIGH) for Mexico (2014); American Community Survey (ACS) for the United States (2014).

### ***Rental and mortgage cost burden vary across the income distribution***

Yet, housing cost burden (still considering the narrow definition of rent and mortgage (interest) payments and abstracting from other costs) varies strongly across the income distribution and is considerably higher for the poorest households. In nearly all countries housing cost burden as a share of income is highest for households in the bottom quintile of the income distribution (Figure HC1.2.2, see online Appendix HC1.2.A2 for more quintiles and earlier years), regardless of whether the household (1) is a tenant (Panel A) or (2) services an outstanding mortgage (Panel B):

- (1) Low-income tenant households face a higher burden than their better off peers in the majority of countries (Panel A of Figure HC1.2.2). In Chile, Greece and the United States households in the bottom quintile of the income distribution face housing costs that make up half or more of their income. Yet in the majority of countries low-income tenant households face median housing costs between 20 to 45% of income. The median burden is lowest with 20% or less for households in Central and Eastern European countries and Malta. Only in Ireland and Bulgaria where rental costs are a relatively small share of income across the income distribution, the households in the middle quintile confront a slightly higher or similar burden to households in the bottom quintile.
- (2) In all countries the median mortgage cost as a proportion of disposable income is highest for households in the bottom quintile of the income distribution (Panel B of Figure HC1.2.2). In Chile the median household in the bottom quintile of the income distribution faces mortgage costs of 80% of income or more. In most Southern European countries, France, Ireland, Mexico, Canada and the United States the median burden of low-income households is between 40% and 55%. In most Central and Eastern European countries, in German speaking countries, Australia, Japan, Korea and the United Kingdom mortgaged households face less than 40% of housing cost relative to income at the median. In Finland, the Czech Republic and Sweden the burden is lowest for low-income households with the mortgage burden amounting to less than a fifth of disposable income.

While in most countries the median burden barely differs between households in the second and third quintile for either tenure (mortgaged or tenant), the burden for households in the bottom quintile of the income distribution in many countries is significantly higher compared to the middle of the income distribution (see online Appendix HC1.2.A2).

Countries with significantly higher mortgage burdens on low-income households compared to households in the third quintile are Chile, Iceland, Greece, Canada, the United States, Mexico and Southern European countries and Poland quintile (Panel B, Figure HC1.2.2). In a third of countries -- especially in Nordic countries, Luxembourg and the Netherlands but also in German-speaking countries and Australia -- by contrast, the median burden is similar for mortgaged households in the bottom and third quintile.

Among tenant households the spread of the median burden across the income distribution is somewhat lower and indeed very low mostly in Central and Eastern European countries where ownership is the dominant tenure type (Panel A, Figure HC1.2.2), for an overview, see, for example, Norris and Shields (2007). Median burdens are nevertheless clearly higher for households in the bottom quintile compared to the third quintile in a good number of countries, particularly in Canada, Chile, Greece, Spain and the United States and pronounced for Nordic countries, Mexico and Japan.

While in most countries differences between the bottom and the third quintile are similar between tenants and mortgaged owners, the patterns are different between tenants and mortgaged owners in some countries. Various factors may lead to more (or less) housing cost burden across tenure types at different income levels. In countries with stronger social housing sectors such as France the burden on low-income tenants may be lower (see the discussion on housing cost overburden among low-income tenants with subsidized rent below and Indicator HM1.3 on tenure). Access to mortgages, mortgage conditions, loan-to-value and loan-to-income ratios may also vary across income quintiles and countries (André, 2016; Whitehead and Williams, 2016).

### ***Mortgage and rent burden among the low-income population***

Households that spend more than 40% of disposable income on housing are considered overburdened. Figure HC1.2.3 shows the share of population in the bottom quintile of the income distribution living in housing cost overburdened households. The overburden rate is based on the narrow definition of housing costs using rent and mortgage costs. Figure HC1.2.3 further breaks tenure down by private market and subsidized rent which is relatively more common among the low-income tenant population compared to the population higher up in the income distribution in most countries (refer to online Appendix HC12.A3 for prior years and further quintiles and Indicator HM1.3 for more information on the distribution of tenure types across the income distribution).

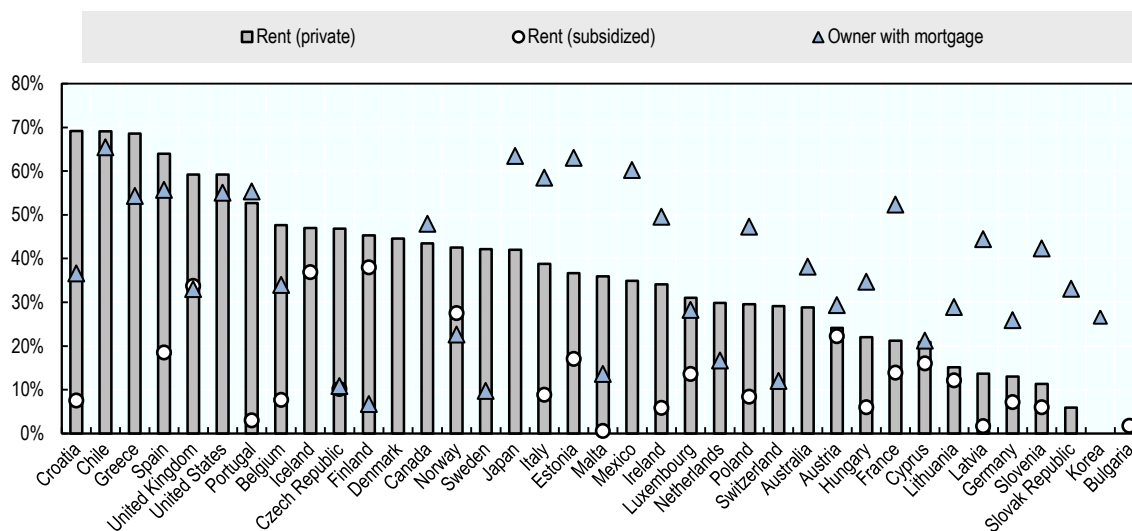
In Croatia, Chile and Greece nearly 70% of the tenant population (private market rent) are overburdened by rent payments. In most Central and Eastern European countries and Cyprus in contrast overburden rates are below 20%.

In all countries with data available the share of overburdened tenants is lower in subsidized rental dwellings, often considerably: in Spain for example the overburden rate among subsidized tenants is 18.5% as opposed to 63.9% among private rental market tenants; in Norway 27.4% it is opposed to 42.5%. The overburden rate in the low-income population that lives in mortgaged dwellings is largest in Chile (65.4%) and Estonia (63%).

Among the population servicing a mortgage overburden rates vary widely across countries. But low-income populations in Nordic countries, the Czech Republic, Malta, the Netherlands and Switzerland are least affected by high housing cost compared to their disposable income (overburden rate among mortgaged population below 20%). Most affected by housing cost overburden is the population in countries hit more severely by the Big Recession and/or in a difficult economic situation such as Chile, Greece, Iceland, Italy, and Spain.

**Figure HC1.2.3. Housing cost overburden rate among low-income owners (with mortgage) and tenants (private rent and subsidized rent), in % of the population**

Share of population in the bottom quintile of the income distribution spending more than 40% of disposable income on mortgage and rent, by tenure, in percent <sup>1 2 3</sup>



1. In Chile, Mexico, Korea and the United States gross income instead of disposable income is used due to data limitations.

2. No data available on subsidized rent in Australia, Canada, Chile, Mexico and the United States. In the Netherlands and Denmark tenants at subsidized rate are subsumed into the private market rent category due to data limitations. No data on mortgage repayments available for Denmark.

3. Results only shown if category is composed of at least 30 observations.

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**Housing costs other than rent and mortgage costs increase the burden on low-income households considerably**

Households face a variety of other costs related to housing beyond mortgage costs (principal repayment and mortgage interest) and rents as considered above. Insurance costs, mandatory services and charges, regular maintenance and repair, taxes and utilities can significantly push up total housing costs. These additional costs are also relevant to and may be substantial for outright owners.

Across countries poor households renting at private market rates and households servicing a mortgage both suffer from high total housing cost overburden rates: In many countries more than 70 percent of households face total housing costs exceeding 40% of their disposable income (Figure HC2.1.4, refer to online Appendix HC12.A4 for earlier years and data for other quintiles). Overburden rates for low-income

tenant households renting on the private market are below 50% only in the Austria, Romania, the Slovak Republic and Latvia. And only in Switzerland, Malta and the Nordic countries except Denmark less than half of poor mortgaged households face total housing costs of less than 40% of their disposable income.

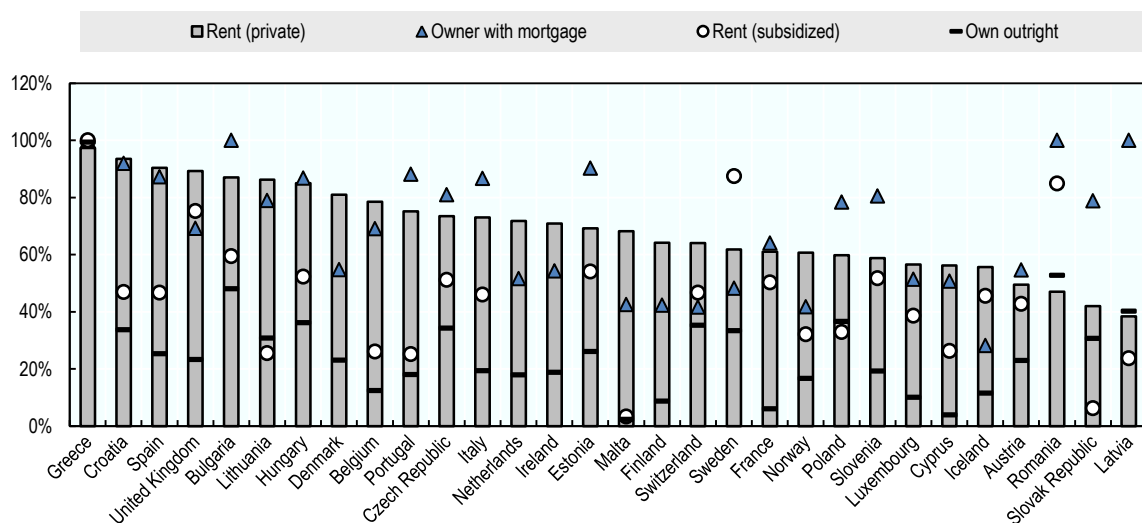
In a little more than a third of European countries total housing costs for households servicing a mortgage are relatively higher than those of tenants renting on the private market. This concerns mainly Central and Eastern European countries where rental markets have been traditionally small, ownership is the dominant tenure type and housing quality is often low (see, for example, Norris and Shields [2007]).

In all countries total housing cost overburden rates are lower -- often considerably -- for tenants of subsidized housing. In Belgium, for example, the overburden rate amongst subsidized tenants is less than half the overburden rate amongst tenants at market price (26.1% opposed to 78.4%). In Austria and the United Kingdom on the other hand, this difference in overburden rates rather small.

Total housing cost overburden rates are as expected lowest for poor households that are outright owners of their dwelling. Nevertheless the overburden rate is still considerable in some countries. For instance 48.0% of poor owner households in Bulgaria and 34.2% of their Czech peers suffer from total housing cost overburden.

#### HC1.2.4. Total housing cost overburden rate among low-income households, by tenure, 2014

Share of households in the bottom quintile of the income distribution paying more than 40% of disposable income on total housing cost, by tenure, in percent <sup>1</sup>



1. Data on total housing cost only available for European countries due to data limitations. Total housing costs include mortgage principal and interest repayment, rents, structural insurance, mandatory services and charges, regular maintenance and repair, taxes and utilities (including electricity, water, gas and heating). In the Netherlands and Norway no tenants at subsidized rate are subsumed into the private market rent category due to data limitations. No data on mortgage repayments available for Denmark.

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Source: OECD calculations based on European Survey on Income and Living Conditions (EU SILC, 2014) except Germany.

## Data and comparability issues

This indicator is calculated based on household surveys. For European countries the European Survey on Income and Living Conditions (EU SILC) is used except for Germany where the German Socioeconomic Panel (GSOEP) is used; for Canada the Survey of Labour and Income Dynamics (SLID); for Chile the Encuesta de Caracterización Socioeconómica Nacional (CASEN); for Korea the Korean Housing Survey; for Mexico the Encuesta Nacional de Ingresos y Gastos de los Hogares (ENIGH); and for the United States the American Community Survey (ACS). For Japan, the Keio Household Panel Study is used. Data for Japan is sampled on the respondent level and not on the household level.

Mortgage costs are calculated as the sum of mortgage principal repayments and mortgage interest payments. For Australia and Chile only mortgage principal repayments are available. No data are available on mortgage principal repayments in Denmark and Iceland.

For Australia, Canada, Chile, Mexico, the United States, Denmark and the Netherlands<sup>1</sup> no information on reduced rent is available due to data limitations. All types of tenants are included in the private market rent category. For countries covered through EU SILC the "other" category refers exclusively to accommodation provided for free.

Total housing costs can only be computed consistently for countries analysed based on EU SILC data as not all cost elements that make up total housing costs according to the EU agreed definition are available for other countries.

### **Sources and further reading:**

André, C. (2016), "Household debt in OECD countries: Stylised facts and policy issues", *OECD Economics Department Working Papers*, No. 1277, OECD Publishing, Paris. <http://dx.doi.org/10.1787/5jm3xgtkk1f2-en>;

Norris, M. and P. Shields (2007): "Housing inequalities in an enlarged European Union: patterns, drivers, implications", *Journal of European Social Policy*, Vol. 17(1), pp. 65–76;

Whitehead, C. and Williams, P. (2016) "Changes in the regulation and control of mortgage markets and access to owner-occupation among younger households" (forthcoming).

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<sup>1</sup> For limitations of EU SILC for the analysis of the reduced rent sector in Denmark and the Netherlands refer to Dewilde, C. (2015): "What Have ECHP and EU-SILC to Contribute to the Comparative Study of Housing?", *Critical Housing Analysis*, Vol. 2 (2), pp. 19-26 and Haffner, M. (2015): "EU-SILC: Should We Make Do with What We Have?", *Critical Housing Analysis*, Vol. 2 (2), pp. 27-34.