

## HC1.3. ABILITY OF HOUSEHOLDS TO KEEP DWELLING WARM

### Definitions and methodology

In addition to rents and mortgages, owners and tenants face other housing outlays such as utility and repair costs (refer to Indicator HC1.2 for a discussion of different definitions of the housing cost burden). Heating costs can be considerable, to the extent that some households cannot afford to keep the dwelling adequately warm. Low building quality exacerbates problems in keeping dwellings warm (Eurofound, 2016). In recent years, the rapid increase in gas and electricity prices has made it more difficult for households to keep their dwellings warm (Hemmerlé, Y., et al., 2023).

This indicator shows the share of households that cannot afford to keep their dwelling adequately warm and is based on household survey microdata.

### Key findings

***In many countries, at least one in ten low-income households struggle to keep their dwelling warm.***

In Czechia, Denmark, Finland, Iceland, Luxembourg, Norway and Switzerland, fewer than 7% of households in the bottom quintile of the income distribution report difficulties keeping their homes warm (Figure HC1.3.1, see online worksheet HC1.3.A1 for earlier years and data for all quintiles). In many other countries, however, the situation is difficult for a large share of households in the bottom quintile. In nine countries (particularly in Central, Eastern and Southern Europe), heating affordability problems concern over 20% of households in the bottom quintile. The rates are slightly lower in Belgium, Denmark, Hungary, Germany, Ireland, Italy, Latvia, Malta, the Netherlands, Poland, the Slovak Republic and the United Kingdom, where between 10-20% of households in the bottom quintile report that heating costs are a challenge.

In addition, in five, predominantly Southern and Eastern European, countries more than 15% of households in the middle quintile report difficulties in keeping their dwelling adequately warm. However, in most countries, less than 5% of households in the middle quintile struggle to afford keeping their dwelling warm. Among households in the top income quintile, the share of households that struggle to keep their dwelling warm is highest in Bulgaria and Lithuania at roughly 10%.

Since 2010, in most countries, the share of households in the bottom quintile that report heating challenges has remained stable. The decline was highest in Bulgaria (39 pp), Hungary (14 pp), Latvia (19 pp), Malta (12 pp), Poland (22 pp) and Portugal (12 pp). However, in Denmark, Luxembourg and Spain, the share increased by at least 3 percentage points over this period (see online worksheet HC1.3.A1). The share of households facing problems heating their homes in the third quintile dropped

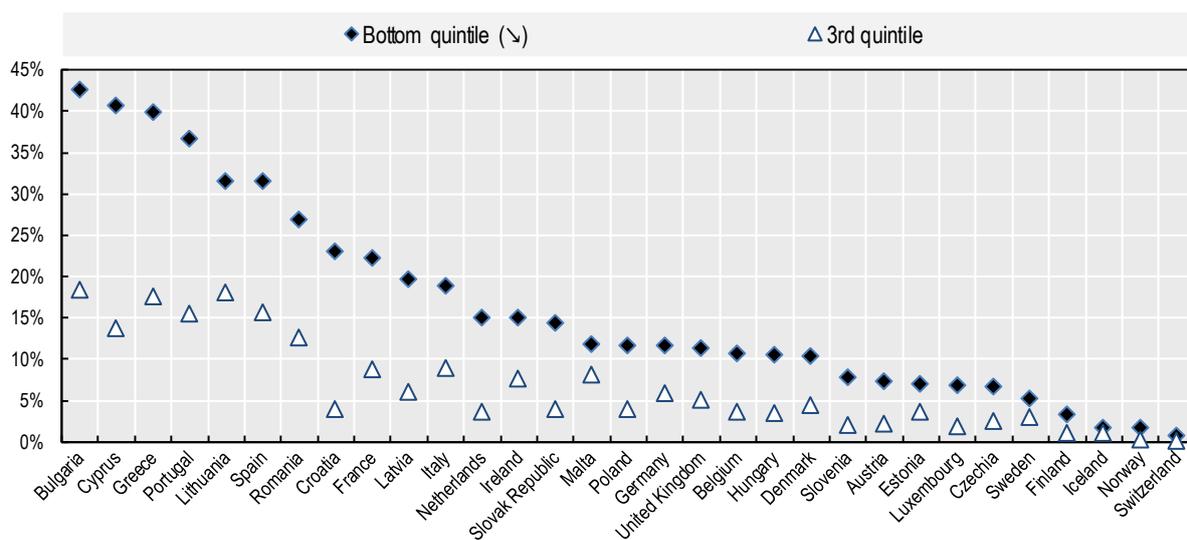
by at least 10 percentage points since 2010 in Bulgaria (50 pp), Cyprus (16 pp), Latvia (13 pp) and Portugal (16 pp).

In many countries, the significant increase in energy prices in 2021 and 2022 made it more difficult to afford to keep dwellings adequately warm. Compared to 2018, the share of households in the bottom quintile with difficulties to keep the dwelling warm increased by over 7.5 percentage points in France, the Netherlands, Romania and Spain. Other countries that had recorded a steady decline in the share of households in the bottom quintile who experienced difficulties keeping the dwelling warm (such as Italy, Latvia, Poland, and Portugal) saw their progress interrupted. For example, in Poland, the share of households with difficulties keeping the dwelling warm increased between 2021 and 2022 -- the first such increase in at least twelve years.

Greater investment in insulation and general building quality can help to decrease a household's heating costs, as often supported by policy measures (see indicator PH 7.1 for information about measures to finance housing improvements and regeneration). However, a household's disposable income may be affected by renovation costs, either directly (owners) or indirectly through higher rents (if landlords pass on the costs of improvements to tenants). Heating costs are also affected by, for example, global commodity prices, the structure of the (national) electricity market, and taxes levied on heating fuel and electricity (Ameli and Brandt, 2014; Flues and Thomas, 2015).

**Figure HC1.3.1. Share of households with difficulties to keep dwelling warm**

Share of households that cannot afford to keep dwelling adequately warm, bottom and third quintiles of the income distribution, in percent, 2022 or latest year available<sup>1,2</sup>



**Notes:**

1. No data available for Australia, Canada, Chile, Colombia, Costa Rica, Israel, Japan, Korea, Mexico, New Zealand, Türkiye or the United States due to data limitations.

Note by the Republic of 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 Island. Türkiye recognises 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".

Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised 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.

2. Data refer to 2021 for Switzerland, 2020 for Norway and 2018 for Iceland and the United Kingdom (no data available for the United Kingdom after 2018 due to data limitations).

Source: OECD calculations based on European Survey on Income and Living Conditions (EU-SILC).

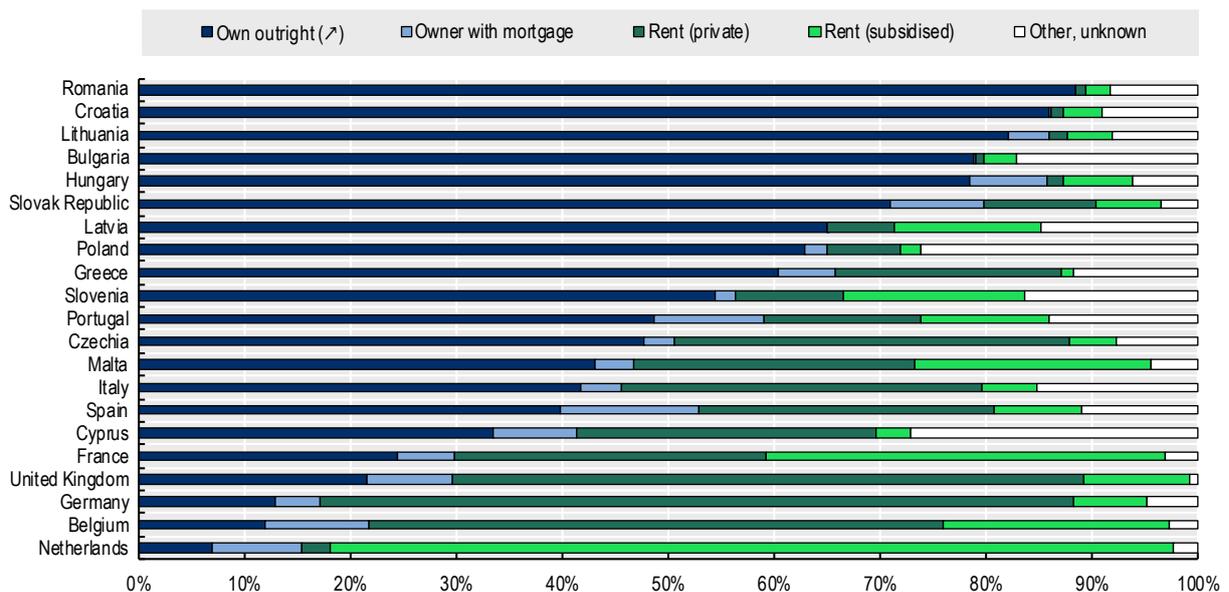
**There are large cross-country differences between the share of tenants and homeowners who struggle to keep their dwelling warm.**

There are considerable cross-country differences in the extent to which tenants and homeowners struggle to keep their dwelling warm (Figure HC1.3.2 shows results for countries in which more than 5% of low-income households are affected by heating affordability problems; see Indicator HM1.3. for more information on tenure structure across the income distribution).

In Bulgaria, Croatia, Hungary, Lithuania, Romania and the Slovak Republic, over 70% of low-income households that report heating affordability problems are outright homeowners. By contrast, in Belgium, France, Germany, the Netherlands, and the United Kingdom, at least two-thirds of low-income households that report heating affordability challenges are tenants (paying market or subsidised rents) – with the largest share (over 75%) in Belgium, Germany and the Netherlands.

**Figure HC1.3.2. Tenure structure of low-income households with difficulties to keep dwelling warm**

Tenure shares of low-income households that cannot afford to keep dwelling adequately warm, in percent, 2022 or latest year available, selected countries<sup>1,2,3</sup>



Notes:

1. No data available for Australia, Canada, Chile, Colombia, Costa Rica, Israel, Japan, Korea, Mexico, New Zealand, Türkiye or the United States due to data limitations.

2. Breakdown by tenure type only shown for countries where i) more than 5% of low-income households report heating affordability problems and ii) 100 or more households in the survey report heating affordability problems.

3. Data refer to 2021 for Switzerland, 2020 for Norway and 2018 for Iceland and the United Kingdom (no data available for the United Kingdom after 2018 due to data limitations).

Source: OECD calculations based on European Survey on Income and Living Conditions (EU-SILC).

## Data and comparability issues

This indicator is calculated based on the European Survey on Income and Living Conditions (EU-SILC) for European countries only. No comparable information is available in the household surveys of other countries. The variable in EU-SILC refers to whether the household can afford to keep the dwelling adequately warm, regardless of the needs of the household. Since 2019, the United Kingdom is not included in EU-SILC.

Data collection for household surveys faced additional limitations during the COVID-19 pandemic, which may affect the quality of data for 2020 and 2021. This included challenges to conducting face-to-face interviews, as well as difficulties to interpret certain questions in the context of the pandemic (e.g. questions relating to the primary place of residence among young people who had returned to live with their parents during the pandemic). With regards to EU-SILC, there were also cross-country differences in how the reference period was defined, as some countries interpreted the reference period as “before the crisis – as usual” while others considered the impacts of the pandemic (Eurostat, 2020).

Data from EU-SILC are also subject to variation across years due to limited sample sizes. Although weights are used to help ensure data are representative of the population, and all indicators in the OECD Affordable Housing Database rely on variables with at least 100 observations, caution should still be exercised when comparing data across years.

The indicator is based on households self-reporting whether their dwellings is adequately warm. Social and cultural characteristics may influence the likelihood for households to declare their ability to keep their dwellings warm, as there is no standardized definition or temperature for a dwelling to be considered adequately heated. The perception of adequate temperature varies from country to country and from person to person (EU Energy Poverty Advisory Hub, 2023).

## Sources and further reading

- Ameli, N. et N. Brandt (2014): "Determinants of Households' Investment in Energy Efficiency and Renewables: Evidence from the OECD Survey on Household Environmental Behaviour and Attitudes", OECD Economics Department Working Papers, No. 1165, Éditions OCDE, Paris. <http://dx.doi.org/10.1787/5jxwtlchggzn-en>.
- Eurofound (2016), Inadequate housing in Europe: Costs and consequences, Publications Office of the European Union, Luxembourg.
- EU Energy Poverty Observatory (EPOV), [www.energypoverty.eu](http://www.energypoverty.eu).
- EU Energy Poverty Advisory Hub (2023) The "Inability to keep home adequately warm" indicator: Is it enough to measure energy poverty?, [The "Inability to keep home adequately warm" indicator: Is it enough to measure energy poverty? - European Commission \(europa.eu\)](https://ec.europa.eu/eipohub/en/publications/the-inability-to-keep-home-adequately-warm-indicator-is-it-enough-to-measure-energy-poverty)
- Flues, F. and A. Thomas (2015), "The distributional effects of energy taxes", OECD Taxation Working Papers, No. 23, OECD Publishing, Paris. <http://dx.doi.org/10.1787/5js1qwkqrbv-en>.
- Housing Europe (2020) Promoting the Area-based Approach to Tackle Energy Poverty in the Wake of the EU Green Deal. <https://documentcloud.adobe.com/link/track?uri=urn%3Aaaid%3Aascds%3AUS%3A41dcfc1c-b45d-4a5a-b880-4e751ef70c8d#pageNum=1>.
- OECD (2021), *Brick by Brick (Volume 1): Building Better Housing Policies*, OECD Publishing, Paris, <https://doi.org/10.1787/b453b043-en>.
- OECD (2023), *Brick by Brick (Volume 2): Better Housing Policies in the Post-COVID-19 Era*, OECD Publishing, Paris, <https://doi.org/10.1787/e91cb19d-en>.
- OECD (2022), *Decarbonising Buildings in Cities and Regions*, OECD Urban Studies, OECD Publishing, Paris, <https://doi.org/10.1787/a48ce566-en>.
- Hemmerlé, Y., et al. (2023), "Aiming better: Government support for households and firms during the energy crisis", *OECD Economic Policy Papers*, No. 32, OECD Publishing, Paris, <https://doi.org/10.1787/839e3ae1-en>.