

Quality of life

Wealth distribution and social mobility



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Research carried out prior to the UK's withdrawal from the European Union on 31 January 2020, and published subsequently, may include data relating to the 28 EU Member States. Following this date, research only takes into account the 27 EU Member States (EU28 minus the UK), unless specified otherwise.

This report presents the results of research conducted largely prior to the outbreak of COVID-19 in Europe in February 2020. For this reason, the results do not fully take account of the outbreak.

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Country codes

27 EU Member States

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

Other countries

AU	Australia	JP	Japan	TR	Turkey
CA	Canada	KR	Republic of Korea (South Korea)	UK	United Kingdom
CH	Switzerland	MX	Mexico	USA	United States of America
CL	Chile	NO	Norway	ZA	South Africa
IS	Iceland	NZ	New Zealand		

List of acronyms

COVID-19	coronavirus disease 2019
ECB	European Central Bank
EU-SILC	European Union Statistics on Income and Living Conditions
GNI	gross national income
HFCS	Household Finance and Consumption Survey
LWS	Luxembourg Wealth Study
NUTS	Nomenclature of Territorial Units for Statistics (from the French: Nomenclature des unités territoriales statistiques)
OECD	Organisation for Economic Co-operation and Development
SHARE	Survey of Health, Ageing and Retirement in Europe
WEF	World Economic Forum

Executive summary

Introduction

Increasing attention is being paid to social disparities and economic inequality in both the research and policy arenas. It is clear that wealth, or the lack of it, has major implications for a person's opportunities in life. Earlier research has found that wealth is much more unequally distributed than income. There are numerous channels through which wealth is transmitted from parents to children and can positively aid the latter, while the lack of parental wealth can hinder opportunities for children.

The research presented in this report focuses on wealth per household member.

Policy context

Aiming for inclusive growth, with equal opportunities as a core principle, is at the centre of the EU's growth strategy. The European Pillar of Social Rights is built on the same principle. Research into wealth can shed light on inequalities by highlighting wealth disparities both within and between countries and in social groups and by studying the role of wealth (or lack of it) in a person's life opportunities.

Wealth research can also further the EU's ambition to foster fair taxation. In addition, analysing wealth distribution will help to obtain a comprehensive picture of poverty in Europe, contributing to finetuning poverty reduction policies as well as designing inclusive health policies. Such research can play a role in identifying the most economically vulnerable groups, including in the context of the COVID-19 pandemic, thereby helping to design appropriate support.

Key findings

Wealth and inequality

- According to the Household Finance and Consumption Survey (HFCS), there was scarcely any change in wealth inequality in the aggregate population of the 14 countries observed across three waves: 2010, 2014, and 2017. For four countries, there was a statistically significant increase (Finland, Greece, Slovakia and Slovenia), while for two, there was a decrease (Latvia and Poland).
- Among the 21 HFCS countries examined, wealth inequality was lowest in most of the eastern and southern Member States. Austria, Cyprus, Germany and the Netherlands are the countries with the highest inequalities. Some convergence was

observed; for example, some countries with higher initial levels of inequality experienced a decrease and some with lower initial levels experienced an increase.

- On average across the 21 countries, the value of the assets (not including liabilities) of the top wealth quintile is 60 times greater than those of the bottom wealth quintile.
- For over 4% of the population in the 21 countries, the value of liabilities is greater than that of assets. Most people with negative household net wealth are young, income-poor, asset-poor, more likely to be unemployed and to rent their accommodation, and more likely to draw on private loans and credit lines.
- On average across countries, the household's main residence accounts for more than half of total gross assets for the bottom 80% of households in terms of net wealth, while it accounts for 42% of assets of the wealthiest 20%. The wealthiest 20% have 12% of their gross assets in self-employed business wealth.
- There is a gender gap in net wealth when controlling for other socioeconomic characteristics. For tertiary-educated single-person households, the gender gap is smallest in Estonia, France, Germany and Hungary and largest in Austria, Greece and the Netherlands.

Housing and homeownership

- Homeownership is more widespread in Member States with lower wealth inequality. Wealth inequality is higher in all but one country when real estate wealth and mortgage debt are excluded from the calculations, pointing to the potential equalising effect of homeownership on wealth distribution. Homeownership appears to increase wealth levels, particularly for the bottom quintiles of wealth distribution.
- Renters are much less wealthy than homeowners. Even in Austria, France, Germany and the Netherlands, where renters account for between one-third and half of the population, very few renters (between 1% and 4%) belong to the top net wealth quintile. Wealth inequality is also much higher among renters than homeowners.
- Few people, and especially renters, hold assets beyond deposits, voluntary pensions and real estate, suggesting that most people do not self-select their renter status, for example using the money that might have gone into purchasing a home to invest in potentially high-yielding financial assets.

- Individuals who are homeowners owing to wealth transfers from relatives (13% of the population) are hardly ever found in the bottom wealth quintile, suggesting a high degree of wealth persistence.

Social mobility

- The research points to the clear persistence of wealth, whereby individuals whose household received a substantial gift or inheritance are wealthier on average for each age–education combination.
- There is a clear association between higher educational levels and wealth outcomes.
- The research highlights the importance of parental education for intergenerational mobility. Having a tertiary-educated parent greatly increases the likelihood that the descendants will complete some form of tertiary education, and this association has become more significant in recent decades.
- Apart from parental education, having a wealthy background – as demonstrated by the receipt of a substantial gift or inheritance – is related to higher educational attainment. Furthermore, better housing conditions during a person’s upbringing lead to better educational outcomes.
- The effect of parental wealth on the wealth of descendants is twofold: parental wealth ensures appropriate living standards, which are fundamental during upbringing and lead to higher educational attainment, and it provides a buffer for young adults, allowing them to rely on parents for financial support.
- Social background remains an important factor in the likelihood of becoming wealthy. In several countries, the average advance in wealth due to inheritance is greater than the advance associated with having a university degree compared with only a primary school education.

Policy pointers

- Monitoring wealth distribution and analysing the consequences of unequal wealth holdings provides input for designing fair social policies.
- The introduction of a compulsory wealth declaration would help to clamp down on both hidden wealth and hidden income, facilitate the monitoring of wealth distribution, foster more conscious financial decisions and lead to better quality research on wealth.
- Coordination of wealth-related taxes in the EU could level the playing field and help in the fight against tax evasion. Promoting financial literacy could foster greater asset diversification to the benefit of poorer people.
- Public policies for equal opportunities to counterbalance wealth differences should focus on securing good living conditions during childhood, ensuring (or raising) minimum educational attainment and promoting access to higher education.
- Housing policies should seek fair and efficient ways to increase housing supply in cities, improve public transport and incentivise teleworking to reduce the demand on overcrowded city centres. To achieve this, a balance between supporting homeownership and providing public housing is essential.

Introduction

Social disparities are receiving increasing attention in both the policy arena and academic discourse. Several recent research strands have focused on various aspects of inequalities. Inequalities fall into two general categories. One is inequalities of opportunity in terms of access to education, jobs, finance or the judicial system, for example. The other is inequalities of outcomes, such as income, wealth, health and educational attainment. Striving for fairness in the distribution of economic resources is crucial to ensure that societies are stable and citizens do not feel disenfranchised.

Perhaps the most important concern about income and wealth inequalities is that higher inequality has been correlated with less intergenerational social mobility: the children of poor families tend to stay poor, while the children of rich families tend to stay rich (Andrews and Leigh, 2009; Blanden, 2013; Corak, 2013). For example, in some Nordic countries (Denmark, Finland and Norway), where income inequality is relatively low, social mobility is relatively high. In contrast, in countries where income inequality is relatively high (Italy, the UK and the USA), social mobility is relatively low. While there are differences in intergenerational mobility in different regions in each country, Bratberg et al (2016) found that the most socially mobile region in the USA was substantially less mobile than the least mobile regions of Norway and Sweden. While ‘fairness’ is a complex concept, it cannot be regarded as ‘fair’ to have two people reaching different outcomes when they have the same talent and make the same effort, just because of their different family background.

Wealth, or the lack of it, can have major implications for opportunities, as Fessler and Schürz (2018a) and the Organisation for Economic Co-operation and Development (OECD, 2019) highlight. For example, wealth can support the development and well-being of descendants, it can serve as collateral to borrow against for paying for education or starting a company, it can provide a stream of income or user value by living in one’s own property and it can provide a cushion in case of income losses. Therefore, the study of wealth distribution and composition and its impact on social mobility is crucial for a better understanding of the opportunities that different segments of society face.

EU policy context

Wealth research has important implications for various EU policy agendas, as outlined below.

Assessing inequality and poverty

In the past two decades, the EU has had two landmark economic and social development strategies: the Lisbon strategy (2000–2010) and the Europe 2020 strategy (2010–2020). Both strategies adopted ambitious poverty reduction targets. However, the 2010 target ‘to make a decisive impact in terms of the eradication of poverty’ did not succeed because, rather than declining, the number of people classified as ‘at risk of poverty’ increased by 7.2 million overall from 2000 to 2010 in the first 15 EU Member States. The Europe 2020 target to ‘lift 20 million people out of poverty and social exclusion’ between 2008 and 2020 in the first 27 EU Member States is equally unattainable because, although the number of people deemed ‘poor’ declined by 7.2 million from 2008 to 2018 as indicated by Eurostat’s monitoring values, the 20 million reduction target seems unlikely to be achieved in the final two years.¹ The reason for this is that the main indicator used to measure poverty, namely the ‘at risk of poverty’ rate, actually measures income inequality (or relative poverty) and not poverty in absolute terms (Darvas, 2019a). The indicator of relative poverty is decisive in assessing the overall extent of the indicator ‘at risk of poverty or social exclusion’ of the Europe 2020 strategy; for example, in 2017 (reported by Eurostat for 2018), among the people deemed to be ‘at risk of poverty or social exclusion’, 78% were at ‘at risk of poverty’, 27% reported ‘severe material deprivation’ and 29% lived in a household with low work intensity (these groups can overlap and hence the proportions do not add up to 100%).

As income inequality has slightly increased within several EU countries over recent decades, the ‘at risk of poverty’ rate has also slightly increased. Wealth research can contribute to a more comprehensive picture of living standards in Europe and could be used to advise policymakers about the desirable course of action.

¹ The monitoring values published by Eurostat for any particular year refer to the year of the survey, which considers income in the previous year. Therefore, the Europe 2020 strategy actually refers to a change from 2007 to 2019 and the decline of 7.2 million reported for 2008–2018 actually refers to 2007–2017. See the data at https://ec.europa.eu/eurostat/data/database?node_code=t2020_50

Similarly, the use of the relative poverty measure alone complicates the interpretation of the following EU Social Scoreboard indicator: ‘Impact of social transfers (excluding pensions) on poverty reduction’.² This indicator, which compares ‘at risk of poverty’ rates before and after social transfers (not considering pensions), showed a steady decline in the past decade, yet it is not conclusive that social transfers became less effective in reducing poverty, even though the indicator is frequently used in this manner. The European Commission (2019a) asserts that improved labour market conditions and changes in the adequacy and coverage of benefits, including the fact that benefits sometimes lag behind generally increasing incomes, have an impact on this indicator. Wealth research can provide valuable input into the search for indicators that measure the impact of social transfers on poverty, thereby complementing information from the Social Scoreboard.

Inclusive growth

Inclusive growth continues to be the guiding framework for social and economic developments in the EU, as referenced in the subtitle of the Europe 2020 strategy – *A strategy for smart, sustainable and inclusive growth* (European Commission, 2010) – and emphasised prominently in the annual (sustainable) growth surveys of the European Semester and in assessments of social developments (European Commission, 2020). Growth is considered to be inclusive if it creates opportunities for all segments of the population and shares them fairly (as noted by the OECD; Darvas and Wolff, 2016), while the European Commission (2010) emphasises the need to foster a high-employment economy that delivers social and territorial cohesion.³ Wealth research can support these goals by analysing wealth differences across social groups and regions, with implications for cohesion. Such research can also help in improving the understanding of the role of wealth in education, employment and occupational choices.

More recently, the European Pillar of Social Rights (European Commission, 2017a) listed 20 principles under three main categories:

- equal opportunities and access to the labour market
- fair working conditions
- social protection and inclusion

The Pillar’s principles list areas of social rights such as equal opportunities regarding employment, social protection and education; gender equality; employment support, social dialogue, unemployment benefits, minimum income and pensions; a healthy and safe work environment; and access to childcare, long-term care, healthcare and essential services.

In her political guidelines for the 2019–2024 European Commission, President Ursula von der Leyen reconfirmed the importance of the European Pillar of Social Rights (European Commission, 2019b). Research on wealth and inequality can directly contribute to policy actions under several Pillar principles, as the principles allude to resources such as income, education or quality services that affect people’s opportunities.

Fairness

Social fairness also features prominently in the Commission’s political guidelines. Fairness is mentioned in the context of falling poverty and inequality, driven by the growth of Europe’s unique social market economy. Income inequality in the EU as a whole has indeed been falling since 1995, with the exception of a few years in the aftermath of the 2008 global financial and economic crisis (the Great Recession), when it remained more or less stable (Darvas, 2019b).⁴ EU-wide income inequality reduction has resumed in recent years. The main driver of EU-wide income inequality reduction has been economic convergence between EU countries, while poverty in terms of severe material deprivation rate has decreased significantly in countries characterised by initially high poverty rates. Wealth research can shed further light on inequalities by characterising wealth disparities within and between countries and different segments of society and by studying the role of wealth (or the lack of it) in opportunities.

Fair taxation is another prominent European ambition to which wealth research can contribute. Wealth research can identify the vulnerability of certain socioeconomic groups to income or illness shocks, which can help in the design of appropriate tax policies. However, a major problem with wealth data is hidden wealth: according to the estimates of Zucman (2013), around 8% of the global financial wealth of households

2 More information on the Social Scoreboard is available at <https://ec.europa.eu/eurostat/web/european-pillar-of-social-rights/indicators/social-scoreboard-indicators>

3 More information on inclusive growth is available at <https://www.oecd.org/inclusive-growth/>

4 It is important to highlight that income inequality in the EU population as a whole is different from the weighted average of income inequality within EU Member States. Within-country income inequality has increased in a number of Member States in the past three decades. Eurostat publishes the weighted average of within-country inequalities for the EU and euro zone. This practice is different from, for example, that of the US Census Bureau, which publishes income inequality indicators for each state and for the USA as a whole, the latter corresponding to all US citizens (for a further discussion, see Darvas, 2019b).

is held in tax havens, three-quarters of which goes unrecorded. Hidden wealth, which is almost entirely held by the rich, seriously complicates any analysis of wealth inequality. Research efforts are being made to incorporate hidden wealth in wealth analysis.

Wealth research also has implications for the EU's health agenda. Low-income households are five times more likely to have unmet healthcare needs than higher income households (OECD and EU, 2018). Out-of-pocket payments accounted for more than one-third of health spending in some southern and eastern EU countries in 2016, while the EU average is 18%.⁵ In general, countries that have a high proportion of out-of-pocket spending also have a high proportion of the population (particularly among low-income groups) facing catastrophic payments for healthcare,⁶ and these people may not have assets to buffer these excessive costs. Wealth research can help to identify socioeconomic groups that are susceptible to and inform policies for mitigating the risk of large healthcare payments relative to accumulated wealth.

The COVID-19 pandemic, which shocked the world in 2020 and caused human suffering in the epicentres not witnessed since the Second World War, puts wealth inequalities in a special policy context. Despite various government efforts to protect companies from bankruptcies and employees from layoffs, the extraordinary economic shock caused by lockdown measures and disruptions to supply chains are likely to increase unemployment throughout Europe. Those who are unemployed and live in countries with less generous unemployment benefit schemes will need to draw on their savings, if they have any. The policy challenge is to find appropriate ways to support households in which earners lose jobs or face major wage reductions, while not having sufficient liquid savings.

Contributing to evidence-based knowledge

Research on various types of inequalities is abundant, especially on income inequalities. However, owing to improved data availability on wealth in recent decades, the literature on the characteristics and implications of wealth is also growing. Previous literature has been able to characterise wealth distribution fairly well and identify several notable mechanisms through which

wealth engenders wealth. Chapter 1 of this report reviews existing knowledge from the literature, focusing on two interrelated aspects: wealth distribution and the role of wealth in social mobility.

This report adds new empirical knowledge on wealth in the following ways.

- It uses household-level data from three datasets: the Household Finance and Consumption Survey (HFCS), the Survey of Health, Ageing and Retirement in Europe (SHARE) and the Luxembourg Wealth Study (LWS). By this means, it analyses if different datasets lead to similar results.
- It widens the geographical coverage of the existing research by using evidence on up to 22 EU countries. A large proportion of previous studies have analysed US data, while another important research strand scrutinised data from northern European countries, such as the Nordic countries, the Netherlands and the UK. Relatively little research has focused on other EU countries, in particular smaller Member States. Chapter 2 presents a cross-country overview.
- A crucial aspect of wealth disparities is social background. This report contributes to the gender gap analysis by estimating the gender wealth gap on the basis of the latest HFCS (2017) (Chapter 2). It also focuses on wealth composition, namely the income sources of people with different wealth levels. Moreover, it reveals the characteristics of people with negative wealth and compares homeowners, rent-payers and landlords (Chapter 3).
- The impact of wealth on social mobility is assessed by analysing two different aspects – education and wealth – and their interconnections. The report studies the role of parents' wealth and education as determinants of their offspring's achievements. It assesses how the link between wealth and social mobility varies across countries (Chapter 4).
- The report assesses the policy implications of the findings, which are contrasted with earlier results from the literature (Chapter 5).

A detailed description of the methodology and supplementary analyses is included in a working paper to be found on the web page of the present report (<http://eurofound.link/ef20034>).

5 According to Eurostat, 'household out-of-pocket payment' means a direct payment for healthcare goods and services from the household primary income or savings, where the payment is made by the user at the time of the purchase of goods or the use of the services.

6 Catastrophic health spending is defined as out-of-pocket payments exceeding a predefined percentage or threshold of a household's ability to pay for healthcare. 'The incidence of catastrophic health spending varies considerably across EU countries, ranging from fewer than 2% of households in France, Ireland, Slovenia, Sweden and the United Kingdom, to over 8% of households in Greece, Hungary, Latvia, Lithuania, Poland and Portugal' (OECD and EU, 2018).

1 Overview of earlier findings

There is a growing body of literature on wealth inequality and the impact of wealth on the intergenerational transmission of advantages and disadvantages, which has been facilitated by improved access to wealth surveys (Killewald et al, 2017). This chapter reviews this literature by looking at both theoretical and empirical studies. The important factors assessed in this literature review include wealth concentration – its drivers and the interaction with the socioeconomic characteristics of households – the implications of wealth inequality for social mobility and the channels through which wealth (or the lack of it) affects social mobility.

Wealth distribution

While the distribution of income receives great attention in academic and policy discussions, recent advances in the availability of wealth microdata datasets have given rise to a growing body of literature on the analysis of wealth distribution. Despite great improvements in data availability and comparability across countries, data on household wealth have limitations. Survey respondents might not reveal all of their assets and liabilities when surveyed. This can be particularly problematic when some of the wealth is held in tax havens, for the purpose of avoiding taxes. According to Zucman (2013), around 8% of the global financial wealth of households is held in tax havens, three-quarters of which goes unrecorded. Hidden wealth, which is almost entirely held by the rich, seriously complicates any analysis of wealth inequality, even though some surveys, such as the Household Finance and Consumption Survey (HFCS) from the European Central Bank (ECB), tend to overrepresent wealthy individuals among the respondents.⁷ In addition, survey respondents might not accurately estimate the value of their assets. For example, real estate prices can change substantially and individuals might not have an accurate perception of the value of their properties. Since real estate constitutes the bulk of household wealth for most households, imprecision in valuing can have a significant impact on wealth data. The value of non-listed shares, including family businesses, is also bound to be uncertain. The prices of listed or quoted assets, such as equities or investment fund shares, could be evaluated precisely, but the valuation of a whole portfolio of diverse assets might be

difficult. The large variation of asset prices through time implies that the value of wealth also fluctuates. For example, average listed stock prices declined by about one-third from February to April 2020, implying a sizeable reduction in wealth for those who hold equities. Notwithstanding these difficulties, the literature has established several stylised facts about the distribution of wealth.

Wealth concentration and inequality

Wealth is more unequally distributed than income and it is highly concentrated among the wealthiest households (Killewald et al, 2017; ECB, 2020a; OECD, forthcoming). By using the OECD's wealth distribution database, the OECD (forthcoming) reports that, on average across OECD countries, the richest 10% of households hold about half of total private net wealth (the difference between assets and liabilities), not considering claims on compulsory pension schemes. In comparison, the top 10% of earners hold about one-quarter of total income. On the other hand, the bottom 20% of wealth holders have negative wealth: their assets are worth less than their liabilities.

There is also a great diversity of wealth inequality across countries. By using microdata from the Luxembourg Wealth Study (LWS) for five countries (Finland, Italy, Sweden, the UK and the USA), Cowell et al (2018) concluded that the cross-country variation in levels of household wealth and in wealth inequality was not attributable to differences in the distribution of household demographic and economic characteristics but rather reflected strong unexplained country effects.

Changes in wealth inequality

Household wealth microdata from harmonised wealth surveys have been made available in recent decades. Using data going back over a century for the USA, Saez and Zucman (2016) combined income tax returns with macroeconomic household balance sheets to estimate the distribution of wealth since 1913. To estimate the wealth of individuals, they reviewed the incomes reported by taxpayers, taking into account assets that do not generate taxable income. They included income derived from wealth, such as the dollar value of interest and dividend income, and, by assuming a percentage rate of returns on certain assets, calculated wealth values. They found that wealth concentration was very high in the beginning of the 20th century, then fell from

⁷ Overrepresentation among the respondents is corrected by appropriate weighting so that the overall sample, when weighting is applied, is representative of society. Country practices for overrepresentation might differ, limiting cross-country comparability.

1929 to 1978, and has continuously increased since then. While Saez and Zucman (2016) tested their method in three microdata datasets in which both income and wealth were observed, including the US Survey of Consumer Finance (SCF), Wolff (2016) used the SCF directly and reached different conclusions. He concludes that there was little movement in US wealth inequality from 1962 to 2007 and then it increased sharply from 2007 to 2010 and remained broadly unchanged until 2013. The findings of Cowell et al (2018), which are based on the SCF, and of the OECD (forthcoming), which are based on the LWS, are in line with the findings of Wolff. Nonetheless, there seems to have been an increase in wealth inequality in the USA from 2007 to 2010, which Wolff attributes to the high leverage of middle-class families, the high proportion of homes in their portfolio and the plunge in house prices owing to the Great Recession.

Alvaredo et al (2017) found tendencies in France and the UK similar to those in the USA, whereby a very high level of wealth inequality in the early 20th century declined by the early 1980s, followed by some increase. However, the increase since the early 1980s and the level of wealth inequality are lower in France and the UK than in the USA. The uncertainty of these estimates is highlighted by the contradictory findings of Cowell et al (2018), who used the British Household Panel Survey and found that wealth inequality in the UK in fact declined from 1995 to 2005.

Age differences in wealth assets

Wealth varies with age. Young people tend to borrow to invest in education and purchase a property, pay off these debts and accumulate financial and other wealth over their working lives, and then draw on their savings after retirement. Therefore, the 20- to 30-year-old cohort always holds much less wealth than the 50 to 70-year-old cohort. However, when focusing on France and Spain, Alvaredo et al (2017) found that the relative position of the young has deteriorated in recent decades. The OECD (forthcoming) reaches the same conclusion for Australia, Canada, Germany, Italy and the USA, using data from the LWS: those in the age brackets 18–34, 35–44 and 45–54 years in the mid-2010s were poorer than those of the same age 15–20 years earlier in those five advanced countries (LWS data do not include sufficiently long time series for countries other than the five countries mentioned).

Dominant role of real estate in asset holdings

Causa et al (2019) showed that housing represents, on average, around half of total private assets in the OECD countries, and an even larger proportion, namely over 60%, among the middle class (defined as the three middle quintiles of the wealth distribution, namely households between the 20% and 80% wealth ranks).

They found that the homeownership rate was negatively associated with wealth inequality: countries with relatively high homeownership rates, such as Hungary, Japan, Slovakia and Spain, exhibit higher wealth shares among the bottom 40% and lower wealth shares among the top 10% than countries with low homeownership rates, such as Austria, Germany and the Netherlands.

There is a growing body of literature arguing that homeownership leads to wealth generation (see, for example, the survey in Killewald and Bryan, 2016). Killewald and Bryan (2016) also presented new estimations for US data that control for divorce and inheritance: there were still significant benefits to homeownership, although such benefits were about 25% less than the estimates from models that did not account for dynamic selection. While these authors found that wealth gains from homeownership and home appreciation rates varied by period, race, neighbourhood and region, homeownership appeared to generate wealth for most households and these benefits persisted even after accounting for previous wealth levels and previous savings rates.

The conclusions of Causa et al (2019) on the role of homeownership in wealth generation in Europe are more nuanced. By estimating tenure wealth gaps (the net wealth ratio between homeowners and renters), they found that homeowners tended to be wealthier than renters, even when housing wealth was excluded. However, they ultimately concluded that households with a higher propensity to save and an appetite for wealth accumulation selected themselves into homeownership rather than becoming homeowners, making them more prone to accumulate wealth.

Fessler and Schürz (2018b) argue that social groups should be classified by the function of wealth into the following groups: renters (who mainly have wealth for precautionary reasons of meeting unexpected expenses and needs), owners (who, in addition to precautionary reasons, also use their wealth to live by means of owner occupation) and capitalists (who not only own their home but also rent out further properties and/or have business wealth). The authors reported a large variability in the proportion of these three social groups across 20 European countries included in the 2014 edition of the HFCS, plus in the USA, but found, without giving a causal interpretation, that renters were at the bottom of the income distribution in all of these countries and that their net wealth was considerably lower than their gross incomes. In contrast, net wealth was typically three to eight times larger than gross income for owners and five to thirteen times larger for capitalists.

Wealth and social mobility

Social mobility, if seen in terms of intergenerational mobility or economic mobility across generations, indicates whether children reach a higher status than their parents. Absolute upward mobility measures if children will achieve a higher status than their parents, for example by completing a higher level of education than their parents. Relative mobility measures if an individual's position is independent from her/his parents, that is, the extent to which people's life achievements are affected by the circumstances they are born into, such as parental education, income and wealth, race, gender and birthplace (Narayan et al, 2018). The two concepts are interrelated and both are important for economic progress and social cohesion. Absolute mobility can lead to improved living standards, while relative mobility reflects equality of opportunities.

There are various aspects of social mobility: education, occupation, income and wealth, just to mention the main ones. Eurofound (2017) studied occupational mobility in European countries and found some encouraging results: structural changes (changes in occupational structure and the size of the population in various occupations) enabled upward social mobility across three generations in the 20th century, absolute mobility between men and women became more similar and the level of social mobility in EU Member States converged over time. However, the study found that, in some countries, social fluidity (relative mobility) in occupations declined.

This report focuses on the role of wealth in all four central aspects of social mobility. There are several channels through which wealth can preserve social status, while a lack of wealth can hinder upward social mobility. These channels include the impact of parental or even grandparental wealth on offspring's educational and cognitive achievements, their health situation and their occupational choice, income and, ultimately, wealth.

Education

Education is a major channel in the transmission of advantage and disadvantage. In fact, there is absolute educational mobility in Europe, the USA and China, meaning that more and more people have tertiary degrees and the proportion of tertiary-educated workers in employment has significantly increased (Darvas and Wolff, 2016). For example, in the first 15 EU Member States, the number of jobs undertaken by tertiary-educated people increased from an estimated 26.5 million in 1992 to 69 million in 2019.⁸

Beyond the overall increase in tertiary graduates in recent decades, the question remains as to what role wealth and family background play in children's education outcomes. Some degree of innate ability transmission is expected between parents and offspring, so that wealth persistence, through this channel, might not constitute a market failure (Blanden, 2013). However, there are various ways through which parental wealth influences the education outcomes of children.

Wealthier parents can provide a stimulating learning environment, including a home in a more privileged neighbourhood with higher quality schooling (Yeung et al, 2002). Such parents have a greater financial capacity to invest in their children, while poorer families tend to devote more of their financial resources to meeting basic household needs (Duncan et al, 2018). Well-off parents are more likely to invest their time in their children's development, such as learning with them, taking them to various extracurricular activities and participating in their school life, which can cultivate the children's talents (Yeung et al, 2002). Parental support remains important at the adolescent and college ages, with more affluent parents providing academic, social and career support and access to exclusive university infrastructure, which less affluent parents cannot afford (Hamilton et al, 2018).

Diemer et al (2019) combine the various channels in a conceptual framework called the 'parent investment model', using US data regarding parents and their children over almost three decades to present estimated results. They conclude that wealth promotes the kind of parental and child processes – primarily expectations and achievement – that support educational success. They find that pre-birth wealth had a significant mediated relationship with educational attainment 17 years later. They also demonstrate that parental wealth plays different roles across the life course.

Even in a more egalitarian country such as Sweden, Hällsten and Pfeffer (2017) report substantial associations between grandparents' wealth and their grandchildren's educational achievements, after controlling for observed socioeconomic characteristics of families and also cousin fixed effects, to cancel out potentially unobserved grandparent effects.⁹ They argue that the consequences of wealth inequality for educational outcomes may be even more significant for less egalitarian countries such as the USA, where family wealth – in addition to its insurance and normative functions – allows the direct purchase of educational quality and access. In turn, by using longitudinal

⁸ The authors' estimate is based on Eurostat, Employment by sex, occupation and educational attainment level [lfsa_egised].

⁹ As cousins have the same grandparents, a cousin fixed effect, which means the inclusion of a dummy variable for each set of cousins in the regression, can capture those grandparent effects which are not captured explicitly by the variables included in the regression model.

US data, Pfeffer (2018) finds a large and rapidly increasing wealth gap in college attainment between the cohorts born in the 1970s and 1980s, which co-occurred with a rise in inequality in children's wealth backgrounds. Using the results from the 2017 Eurobarometer Special Survey on fairness, inequality and intergenerational mobility, Colagrossi et al (2019) find that earlier estimates for social mobility in the EU were biased upwards, namely that social mobility was lower than earlier research had found. Beyond a direct parent-to-child association, the authors could not reject the possibility of a direct grandparent effect at the EU-aggregated level, as well as in a few EU countries.

Therefore, wealth persistence can be associated with educational persistence, because wealthy individuals are more highly educated and so are their children. The opposite can hold true for poorer people and therefore poverty persistence can be associated with the persistence of low education, unless public policies are able to offer high-level educational opportunities to all segments of society.

At the macroeconomic level, wealth concentration might lead to inefficient resource allocation if it is individuals with wealthier parents, rather than individuals with higher innate abilities, who obtain a higher level of education and more productive jobs (Narayan et al, 2018).

Health

Good health improves education and labour market performance and thereby supports income generation and wealth accumulation. It is widely documented that richer and better educated people live healthier and longer lives (Semyonov et al, 2013; Darvas and Wolff, 2016). Braveman et al (2018) argue that this finding can be explained by healthier living conditions, better access to quality healthcare and protection from chronic stress. They also conclude that parents' wealth shapes their children's educational, economic and social opportunities, which in turn shape their children's health throughout life.

Killewald et al (2017) also emphasise that both wealth and health are stock variables, that is, both result from decades-long influences. Therefore, wealth shocks do not immediately affect health outcomes, but persistent changes in wealth can gradually have an impact on health conditions.

Occupational choices

Initial wealth distribution affects occupational choices – wealthier individuals are more likely to take up entrepreneurial roles than poorer people, for instance, influencing output and ultimately the macroeconomic developments of an economy (Banerjee and Newman, 1993). Such choices are likely to perpetuate wealth disparity, as the most profitable occupational decisions

are more readily available to individuals with high initial levels of wealth.

Business and social connections

Business and social connections facilitate the process of finding a good job. The relative importance of these mechanisms changes with economic progress and with the type of educational/health system the country provides (Nayaran et al, 2018).

Investment opportunities

Initial wealth distribution also affects investment opportunities. Collateral facilitates access to credit, while parental wealth provides insurance for riskier decisions. The less wealthy have limited investment opportunities and thus remain poor (Piketty, 2000). Investment allocation differs based not on potential return but on wealth, harming aggregate efficiency and output. Under credit constraints, there are additional incentives for wealth transfers to the next generation, increasing wealth persistence. By studying a longitudinal sample of US households in the period 1968–2009, Elliott et al (2018) find that those with higher initial net worth enjoy higher returns on income and wealth.

Gifts and inheritance

Gifts and inheritances directly boost the wealth and income of offspring. Using 11 countries from the first edition of the HFCS, Korom (2018) shows that households that receive gifts and bequests own considerably more wealth than non-receiving households, all other things being equal. This wealth gap varies hugely along the distribution of net wealth, with the largest gap characterising the richest segment of society. However, gifts and bequests also matter for the middle class: they contribute the most to the stock of private wealth in the broad mid-section and less at the lower and upper ends of the distribution.

In turn, by using a Swedish four-generational wealth dataset, Adermon et al (2018) find that bequests and gifts accounted for at least half of the parent–child wealth correlation, while earnings and education accounted for only a quarter. The authors quantified the parent–child rank correlations at 0.3–0.4, which is higher than the grandparent–grandchild rank correlations of 0.1–0.2.

As regards the role of inheritance in wealth inequality, Boserup et al (2016) find that, in Denmark, bequests increase absolute wealth inequality but reduce relative inequality. Similar findings for Sweden were obtained by Ohlsson et al (2019), who also argue that Swedish welfare-state institutions, and in particular the development of an extensive public occupational pension system, contributed to keeping private inheritance low.

Persistence of wealth over time

Family wealth holdings seem to persist over time. By using a novel approach – a panel of almost 20,000 people with rare surnames whose wealth was observed at death in England and Wales in the period 1858–2012 – Clark and Cummins (2015) conclude that wealth was much more persistent than standard one-generation estimates would suggest, as there was still a significant correlation between the wealth of families five generations apart. Similar findings were obtained for Norway (Hansen, 2014), although for a shorter sample period, as the study concludes that the very top wealthy class in Norway was a rather closed group in the period 1993–2010. Having wealthy parents is the key determinant of belonging to this group, with entrepreneurs and highly paid executives finding it difficult to reach the top 1% and top 0.1%, respectively, of wealth owners.

Wiborg and Hansen (2018) studied the temporal changes in the impact of family background in Norway in the period 1980–2012 by looking at sibling correlations, and thereby controlling for shared family

background. As regards average sibling correlations over all years, they find that correlations were stronger for education than for earnings and wealth. Sibling correlations for education were relatively stable and decreased slightly in the period 1975–2012, while correlations were stable and slightly increasing for earnings and wealth. This indicates that family background still influences earnings, wealth and education, even in more egalitarian countries such as Norway.

Overall, the wealth research reviewed above suggests that previous literature has been able to characterise wealth distribution fairly well and identify several notable mechanisms through which wealth creates wealth on the basis of evidence from several countries. However, an area of research relevant to the EU is to understand the extent of wealth inequality in and between all, or at least most, of its countries, as well as to learn about the role that wealth plays in shaping the opportunities for education and social advancement of European citizens. The following chapters delve into that area.

2 Wealth and inequality

This chapter analyses data on wealth concentration from 21 EU countries and compares them with data from six non-EU countries included in the Luxembourg Wealth Study (LWS). After spelling out the main concepts, the concentration of net wealth and its evolution in the period 2010–2017 is reviewed from both a European and a country-specific perspective. This is followed by an examination of how the distributions of income and wealth relate to each other, an analysis of asset composition and an examination of social differences across the population and how these impact on wealth distribution.

Main concepts

Understanding assets

At a conceptual level, individuals have assets and liabilities; the difference between the two represents net wealth. The three datasets used for reporting net wealth (the HFCS, SHARE and the LWS) adopt similar concepts. While there is a large degree of overlap between the indicators that they cover, there are some differences. In this report, the LWS is used for international comparisons of wealth inequality, but the most detailed analyses are based on the HFCS and SHARE.

In the HFCS, total assets are the sum of non-financial assets (that is, the value of the household's main residence, other real estate, vehicles, valuables and self-employed businesses) and of financial assets (deposits, further disaggregated into sight accounts and savings accounts, mutual funds, bonds, non-self-employed private businesses, shares, managed accounts, money owed to the household, voluntary pensions, whole life insurance and other assets). SHARE includes the same components except the value of valuables (other than cars, real estate and self-employed businesses) and money owed to the household and other assets.

Pension entitlements

Pension entitlements constitute a significant component of the assets of older working generations, but there is limited information available about them.

Mandatory pension plans (public or occupational) are not included in total assets (either in the HFCS or in SHARE). Many countries operate pay-as-you-go pension systems, but as no annual balance is provided for contributors it is very difficult to capture the magnitude of accumulated claims. However, both the HFCS and

SHARE include a variable on the expected pension upon retirement as a percentage of final labour income, although Killewald et al (2017) argue that such expectations tend to be quite inaccurate.

On the other hand, in the few countries that have mandatory funded pension schemes (so-called second pillars), such as Denmark, Estonia, Finland, Latvia, the Netherlands and Sweden (see Table 9.1 in OECD, 2019), contributors receive annual accounts of the accumulated savings. The HFCS provides information on the current value of every pension plan that has a balance, but few countries have such schemes.

Beyond mandatory and voluntary pension plans, people tend to save for their retirement in standard financial instruments too, such as savings accounts. Presumably, in countries where mandatory pension schemes are less generous, people might need to save more on their own for their retirement, via voluntary pension schemes and in other forms. The omission of mandatory pension claims might distort the comparability of assets across countries. To a lesser extent, the lack of information about accumulated healthcare insurance rights also distorts the analysis and the cross-country comparability of wealth distribution. The scope and generosity of mandatory health insurance (as well as tax/social security contributions to fund it) differ significantly across countries. Thus, in countries with limited insurance, people have to save more to cover unexpected healthcare costs than people in countries with more widespread health insurance.

Cash holdings

As information about cash holdings is not available in the datasets examined, this constitutes a limitation. The ECB (2011) estimates that, in 2008, around one-third of the value of euro banknotes in circulation was used for transactions in the euro zone and another third was held as a store of value in the euro zone. The rest was either used as the vault cash of banks (about 10% of the total) or held abroad (about 20–25% of the total).

As Esselink and Hernández (2017) underline that since 2008 the value of euro banknotes in circulation has grown faster than private consumption, and taking the low interest rate environment into account, it can be expected that the proportion of euro banknotes held by euro zone residents for transactions and as a store of value has grown even further. Assuming just a modest increase in this proportion from two-thirds in 2008 to 70% by 2017, the total cash holdings of euro zone residents and non-financial corporations could have

amounted to €785 billion, of which non-financial corporations hold €80 billion.¹⁰ Therefore, the total cash holdings of euro zone households for transactions and as a store of value could have amounted to about €700 billion. This represents 2% of the total assets of euro zone households in 2017, as reflected in the third edition of the HFCS. Thus, 2% of assets are missing from the HFCS and no information is available about their distribution among the various socioeconomic groups of society.

Expected future inheritance

The receipt of an expected future inheritance is a contingent addition to current wealth, which is uncertain in terms of date of receipt and amount. It is not included in wealth surveys, in contrast to inheritance already received. However, an expected future inheritance might influence the behaviour of prospective recipients.

Liabilities

The HFCS divides liabilities into mortgage debt and non-mortgage debt. The latter comprises the outstanding balance of the credit line/overdraft, outstanding balance of credit card debt and outstanding balance of other non-mortgage loans (divided into outstanding balance of private loans and of non-private, non-collateralised loans).

Liabilities in SHARE are divided into mortgage debt on the main residence and financial liabilities, which are substantially more aggregated than in the HFCS, consisting of a simple question to respondents about how much money they and their partners currently owe (outside the mortgage on the main residence).

Net wealth

Net wealth (in the HFCS), or net worth (in SHARE), is the difference between total assets and total liabilities, taking into account only those components of assets and liabilities for which information is available.

Quantification

Quantifying currently held assets and liabilities is relatively straightforward, although respondents might not assess accurately the value of at least some types of their savings. Special difficulties arise in assessing accumulated pension claims when there is a mandatory pay-as-you-go system in place, as well as healthcare claims. Such claims are not included in the wealth surveys used here.

Income

The concept of income differs between the HFCS and SHARE. The HFCS includes total household gross income, that is, after transfers but before taxes. It is divided into several subcomponents and refers to the full year. In contrast, SHARE includes net income, that is, after any taxes and contributions. The SHARE income variable has two main versions: one is based on a direct question to the household on net income, while the other is a composition of the various elements of income.

Reference unit: Household wealth per capita

For the reasons outlined in Box 1, this report focuses on household wealth per capita (household wealth divided by the number of people living in the household) and assigns the same wealth for each individual in the household (for example, in a four-person household, each is assumed to possess one-quarter of the household wealth and this household represents four observations in the sample). Most analyses in this report are conducted at the level of the individual, except in a few cases, as discussed in Box 1.

Country aggregates

In addition to the country-specific data, the results are reported for the combined group of the 21 EU countries (including 18 euro zone members) covered by the 2017 HFCS and the aggregate of the 14 countries that were included in all three editions (see the list of countries in the annex).

The aggregate including all countries is the best available proxy for the EU, and therefore of great interest. Article 174 of the Treaty on the Functioning of the European Union sets the objective of social cohesion and reducing the disparities between the levels of development of the various regions. The study of wealth inequality in the EU can augment the analysis of social and economic disparities – although this study is focused on country-level differences and not on regional (within-country) differences.

While social policies in the EU are predominantly national, and EU social policy initiatives relate to the EU as a whole, the analysis of the euro zone is also of interest. Euro zone membership involves a greater level of economic integration, which has social consequences.

¹⁰ Data on the currency in circulation is from the ECB; data on the currency holdings of non-financial corporations is from Eurostat, Financial balance sheets [nasa_10_f_bs].

Box 1: Household- versus individual-level analysis of wealth

Both the HFCS and SHARE provide wealth variables mainly at the household level, except when they have an individual character (for example, individual retirement accounts). Using household-level indicators for measuring wealth is advisable if legal ownership of assets is not a major driver of divergence between individuals' benefits from these assets. For a household's main residence, and in most cases also for other residences in the household's use, the benefit of use is shared.

For other types of assets whose main benefits come in the form of income and not joint use, and for income itself, whether benefits accrue to the legal owner or to a couple (and thus whether an individual or household analysis is more telling) depends on the choices of the couple, which are mostly unobserved.

In terms of wealth as a risk buffer, such benefits are arguably shared within a household. As a result, an approach taken frequently in the inequality literature is the use of equal-split adults, where the income and wealth of a married couple (the usual form) is divided by two. Some variables are constructed under the assumption of shared benefits, such as transmission variables in SHARE, which enquire whether the couple has received or given substantial gifts.

When wealth data are available for households, research can choose to take into account one of three alternative units: households, households per capita and 'equivalised household size' (whereby household members are given different weights, a frequent measure in household income calculations). In reporting wealth distribution, using the household as a unit is not uncommon (ECB, 2020a; OECD, forthcoming). However, the wealth of a household could obviously differ depending on, for example, the number of income earners in the household, and hence the average wealth for each non-earning household member will also differ. Properties, such as the main residence, but also financial savings, have to serve all members of the household. For example, to live comfortably, a six-person household needs a larger main residence than a single-person household, as well as a larger car and more savings to face unexpected shocks. Whereas 'equivalised wealth' is sometimes considered in research, as it is common to use this unit for income, the argument can be made that wealth is predominantly a stock type of resource, unlike income, which is a flow type of resource. Unlike income, wealth is rarely spent for consumption over the same time period as income, and it is also not as related as income is to the current consumption needs of a person.

This study therefore uses household wealth per capita (total household wealth divided by the number of people living in the household), under the assumption that benefits (not purely financial) are shared, both with partners and with dependants. For households with more than one person, an equal share of household wealth is assigned. For comparability, the same approach is used for household income per capita and not equivalised household income, although the HFCS and SHARE both include a calculation of some types of income at both the individual and the household level.

In a few cases, however, the total household wealth is used for the analysis, namely when analysing wealth differences related to characteristics such as age, education and employment status. The focus then is on the household reference person – to avoid the unintended effect on the results that might come from features of the household and its members. For example, when analysing wealth accumulation across the life span, using the age of the household reference person and the total household wealth is more reasonable, as the wealth per capita measure would assign a large amount of wealth to those young people who live in rich families and a small amount of wealth to those young people who live in poor families, distorting the fact that true ownership and wealth accumulation increases with age.

Regardless of the conceptual differences explained above, the impact of the approach on the summary characteristics of wealth inequality, which are the focus of this report, is minor. For example, the difference between the Gini index* of net wealth inequality for each country does not exceed 0.028 when the aforementioned three approaches are compared, and the correlation between the measures is high (at least 0.969).

For social mobility analyses, the unit of observation is often the individual directly.

Note: *The Gini index or coefficient measures the extent to which the distribution of wealth or income (or, in some cases, consumption expenditure) among individuals or households deviates from a perfectly equal distribution. See more in Box 2.

The June 2013 European Council called for the strengthening of the social dimension of the Economic and Monetary Union, starting with better monitoring of social and employment developments (European Council, 2013). Wealth inequality is an important social phenomenon.

The country aggregates represent the combined population of the countries concerned, and wealth distribution statistics are derived from this pooled sample. This approach differs from calculating the weighted average of country-specific statistics when the statistics are non-linear, which is the case for inequality indicators.

The HFCS data are weighted (using the weights included in these datasets) to properly approximate the population of each country and hence the combined data are representative of the aggregate population of the countries. The SHARE data cover the population aged 50 years and over (for more information, see annex).

Cross-country comparative overview

Concentration of net wealth and its evolution from 2010 to 2017

The analysis started with the distribution and concentration of net wealth (assets minus liabilities) based on HFCS data. The first edition of this survey

collected data mostly from 2010, the second edition collected data mostly from 2014 and the third edition collected data mostly from 2017. To give an overview of wealth inequality, Figure 1 depicts the wealth shares of different segments of society and the Gini index in the HFCS countries, using the most recent edition of the HFCS. Wealth inequality among Europeans is great in terms of both types of measures, namely the Gini coefficient and wealth shares. The ranking of countries according to these indicators is rather similar (even though there are some small differences), as reflected in the very high correlation between the indicators (Box 2). Within-country wealth inequality (the Gini coefficient) is lowest in most of the eastern and southern European Member States: Poland, Slovakia, Slovenia, Lithuania, Greece, Malta, Italy and Croatia. In contrast, wealth inequality is highest in some western European Member States: the Netherlands, Germany and Austria (if only the population aged 45 or above is considered, the country ranking of wealth inequality remains the same). Cyprus is an exception to the south-east versus west divide in wealth inequality, as it has the third highest wealth inequality among the countries included in the HFCS.

The comparison between Poland and the Netherlands illustrates the magnitude of wealth inequality and concentration differences. The Gini coefficient is 55 in Poland and 78 in the Netherlands, which is quite a large gap given the theoretical zero-to-hundred range of the indicator. The wealthiest 5% of society holds a much lower proportion of total wealth in Poland (29%) than in

Box 2: Indicators of inequality

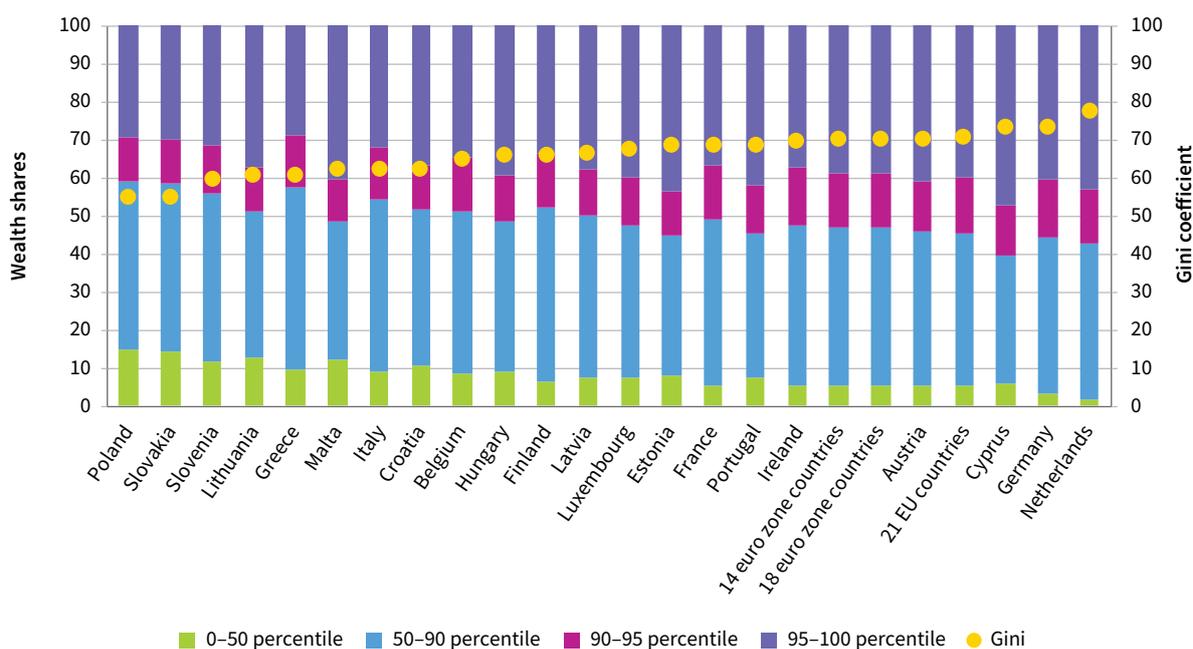
This report uses standard indicators of inequality that are widely used in the literature for income, wealth and other inequalities. Wealth shares show the proportion of net country-wide wealth owned by a certain segment of society. For example, the wealth share of the bottom decile shows what proportion of total country-wide wealth is owned by the poorest 10% of society.

In addition, the Gini coefficient is used as a summary indicator. It expresses the degree of inequality as a single numerical value: the higher the value, the larger the inequality. It corresponds to the normalised area between the Lorenz curve of the distribution and the 45 degrees line, while the Lorenz curve of a distribution of a variable (wealth in this case) represents the proportion of the total of that variable (on the y-axis) belonging to the bottom $x\%$ of the population (on the x-axis; for details, see Neves Costa and Pérez-Duarte, 2019). Importantly, there are negative net wealth households in the sample, which are an important part of the population and contribute to wealth inequality. The Gini coefficient considers these cases.

The summary indicators are sometimes criticised on the basis of mixing inequality developments for different segments of society, such as the poor, the middle class and the rich (Alvaredo et al, 2017). For example, a country may experience both a Gini-reducing decrease in poverty and a rise in the proportion of income going to the top 10%, which increases the Gini coefficient. If these effects offset each other, the overall Gini coefficient remains constant, creating the impression that the distribution of income is not changing, while in fact the middle class is being squeezed out. However, in the case of HFCS data, the Gini coefficient of wealth inequality is highly correlated with wealth share indicators. For example, using the sample of 21 European countries from the 2017 HFCS, the correlation coefficient between the Gini coefficient and the bottom 50% wealth share is -0.96 and the correlation coefficient between the Gini coefficient and the top 10% wealth share is $+0.91$.

As is common practice, the Gini coefficient is multiplied by 100 for ease of reading in this report.

Figure 1: Wealth shares (%) and net wealth inequality (Gini coefficient), 21 HFCS countries, 2017



Notes: The bars show the wealth shares of certain quantiles of the wealth distribution. For example, the green sections show the wealth shares of the bottom 50% of the population in the total net wealth of the country. Country aggregates are based on the pooled sample representing the aggregate population of the countries.

Source: Calculations are based on the 2017 HFCS

the Netherlands (43%), while the bottom 50% of the population holds 15% of total net wealth in Poland but less than 2% in the Netherlands.

Among the two aggregates, wealth inequality is higher in the group of all countries than in the euro zone. The reason for this is that the former also includes Croatia, Hungary and Poland, three countries with a relatively low mean net wealth. Adding them to euro zone countries increases the number of relatively poor people and widens overall wealth inequality.

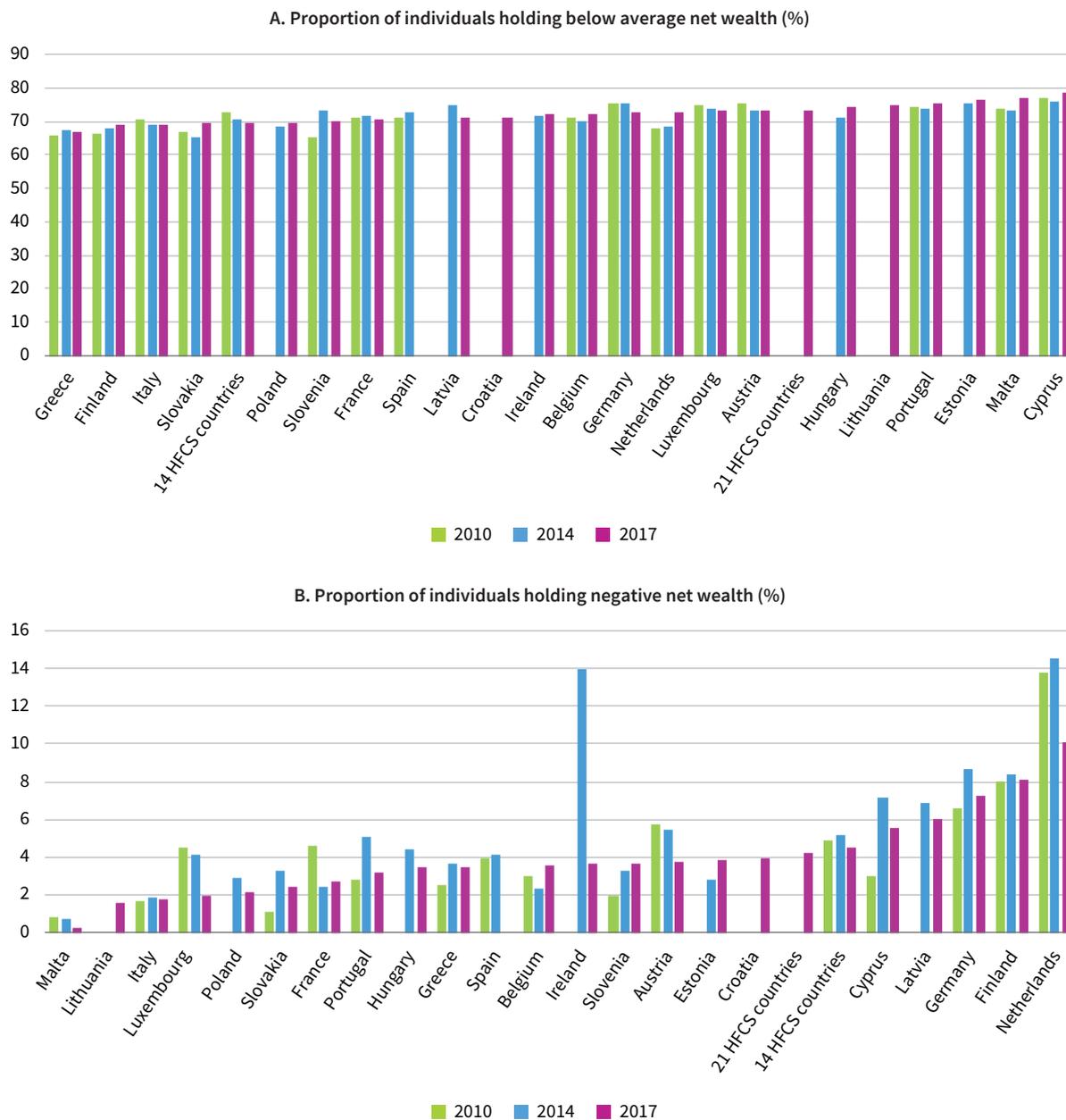
An additional measure of wealth inequality is the proportion of people with wealth below the average. In the aggregate of all countries in 2017, 73% of individuals possess less than half of the overall average wealth; in the euro zone, this figure was slightly below 70%. Country-specific values, which consider country-wide averages, ranged from 67% in Greece to 79% in Cyprus in 2017 (Figure 2A). These large proportions highlight that wealth distribution is strongly right-skewed. The comparison of the three editions of the HFCS shows that there were different changes in different countries, but in the aggregate of the 14 countries that were included in all three editions, there was a modest decline in the overall proportion of people with wealth below the average, from 73% to 69%.

Some people have negative net wealth: the value of their assets is lower than the value of their liabilities. The proportion of such people in 2017 was the lowest in Malta (0.3%) and the highest in the Netherlands (10%)

(Figure 2B); on average, it was slightly below 5% in the aggregate of all 21 countries examined in 2017. The subsection 'Households with negative net wealth' below explores this group of people and finds that most of these people are young, income-poor, asset-poor, more likely to be unemployed and to rent their accommodation and more likely to draw on private loans and credit lines.

The three editions of the HFCS allow for an analysis of the evolution of net wealth inequality between 2010 and 2017. During this period, major changes occurred in the European economy, as in the rest of the world, triggered by the 2008 global financial crisis. In 2010, the euro zone sovereign debt, balance of payments and banking crises escalated in the wake of the financial crisis, with Greece being the first euro zone country to ask for financial assistance in spring 2010. The ensuing economic contraction and unemployment increase in many countries had an adverse impact on incomes and asset prices. By 2014, the euro zone and the EU as a whole started to recover from the economic slump, while 2017 was characterised by a seemingly robust economic expansion, with employment growing throughout the EU and asset prices skyrocketing. These macroeconomic developments presumably influenced wealth inequality. However, as the impact of the economic crisis and the speed of recovery were different across the EU, the implications for wealth inequality were different too (Figure 3).

Figure 2: Additional indicators of wealth inequality and wealth poverty, 22 HFCS countries



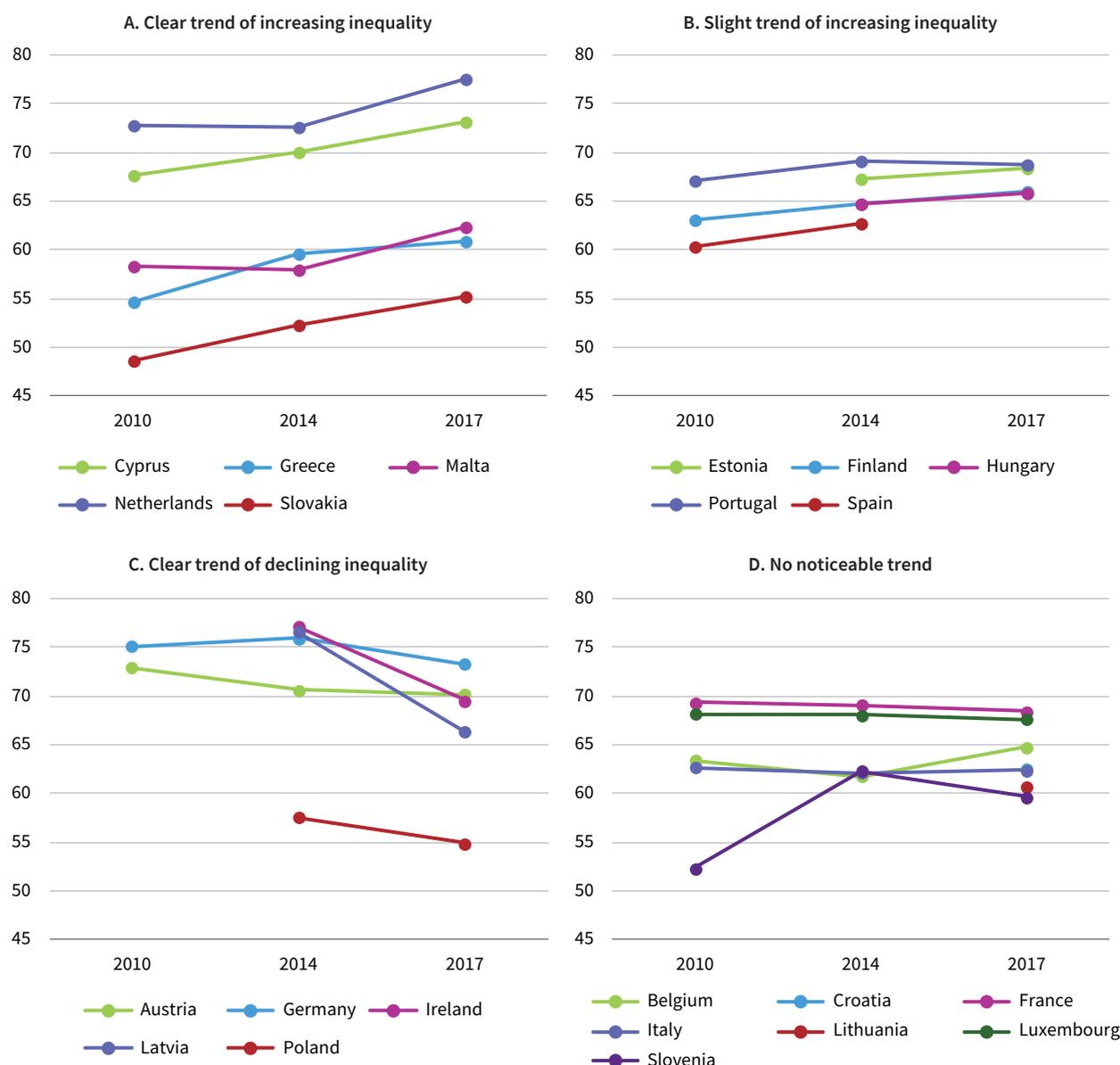
Note: The aggregate used is the 14 countries covered in all three editions of the HFCS.
 Source: Calculations based on the 2010, 2014 and 2017 HFCS

It is notable that, in the aggregate of the 14 countries included in all three editions of the HFCS, wealth inequality scarcely changed between 2010, 2014 and 2017; the Gini coefficient was 69.7, 70.3 and 69.9 (not shown in Figure 3) respectively. Although there was barely any change in wealth inequality for the aggregate population of these 14 countries, the direction of national trends varied.

There is a clear trend of increasing wealth inequality in Cyprus, Greece, Malta, the Netherlands and, Slovakia (Figure 3A); some increase is also noticeable in Estonia, Finland, Hungary, Portugal and Spain (Figure 3B).

Wealth inequality decreased in Austria, Germany, Ireland, Latvia and Poland (Figure 3C). However, no clear trend is noted in Belgium, Croatia, France, Italy, Lithuania, Luxembourg and Slovenia (Figure 3D). Assessing the changes in the point estimates of the inequality indicator at a 95% level of significance, the increases in the Gini index of wealth inequality were statistically significant in Finland, Greece, Slovakia and Slovenia, and the decreases were statistically significant in Latvia and Poland (for details, see the working paper that accompanies this report, which contains supplementary analyses).

Figure 3: Change in wealth inequality, 22 HFCS countries (Gini coefficient)



Source: Calculations based on the 2010, 2014 and 2017 HFCS

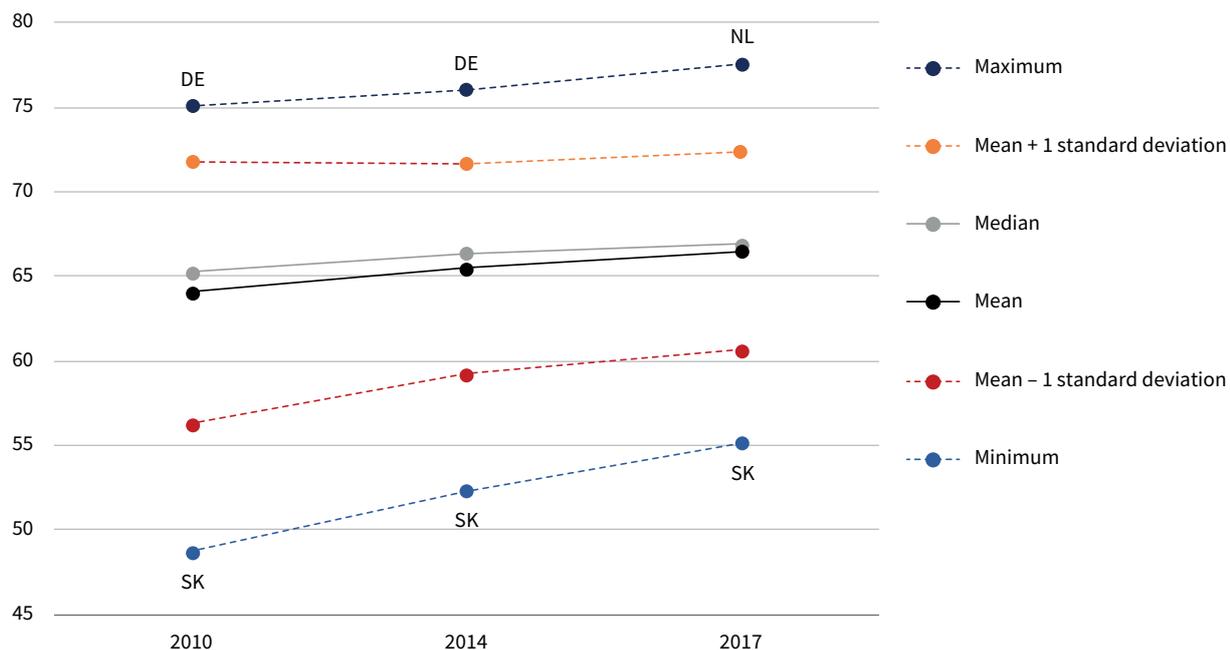
The analysis carried out to summarise the changes suggests that wealth inequality has grown more in those countries that initially had low inequality; for those 14 countries for which data from all three editions of the HFCS are available, regressing the change in wealth inequality from 2010 to 2017 on the initial level of inequality in 2010 leads to a statistically significant negative parameter (so-called ‘beta’ convergence, whereby countries catch up).

However, to comprehend the change over time, a perspective of ‘sigma’ convergence is also useful, as it assesses the change in standard deviation – that is,

whether the average distance from the mean is increasing (countries become less similar to each other) or decreasing (countries become more similar to each other). For the group of 14 HFCS countries for which data from all three editions of the HFCS are available, the average of the national Gini indices increased from 2010 to 2017 (see the mean in Figure 4), with these countries having converged towards this average over the period (while the mean increased from 64.0 in 2010 to 66.4 in 2017, the standard deviation decreased from 7.6 in 2010 to 5.9 in 2017, showing a downward convergence¹¹).

11 For information on the concepts and indicators for monitoring convergence in the EU, see Eurofound (2018).

Figure 4: Evolution of wealth inequality, 14 HFCS countries (Gini coefficient)



Notes: Only those countries that were included in all three editions of the HFCS are considered in this figure. The measures shown are based on country-level estimates (unlike the aggregates based on a pooled sample in other sections of the report).

Source: Calculations based on the 2010, 2014 and 2017 HFCS

It should also be noted that the range of the Gini index (see the minimum and maximum in Figure 4) also shifted upwards – the inequality in the least and the most unequal countries is actually higher in each consecutive survey year.

The exceptions to this general trend are the Netherlands and Cyprus, which already had a relatively high level of wealth inequality in 2010, with both countries experiencing further increases. Further research could explore if lenient tax regimes contribute to high and increasing levels of wealth inequality in these two countries.¹² Another exception is Poland, which had the second lowest wealth inequality in 2014 (after Slovakia) and where wealth inequality had declined further by 2017.¹³

The changes in wealth shares (Figure 5) and Lorenz curves (available in the accompanying working paper) are rather consistent with the changes in the Gini coefficient highlighted so far.

As seen in Figure 5A, the wealth shares of the bottom 50% declined, and the wealth shares of the top 5% increased in all five countries for which the Gini

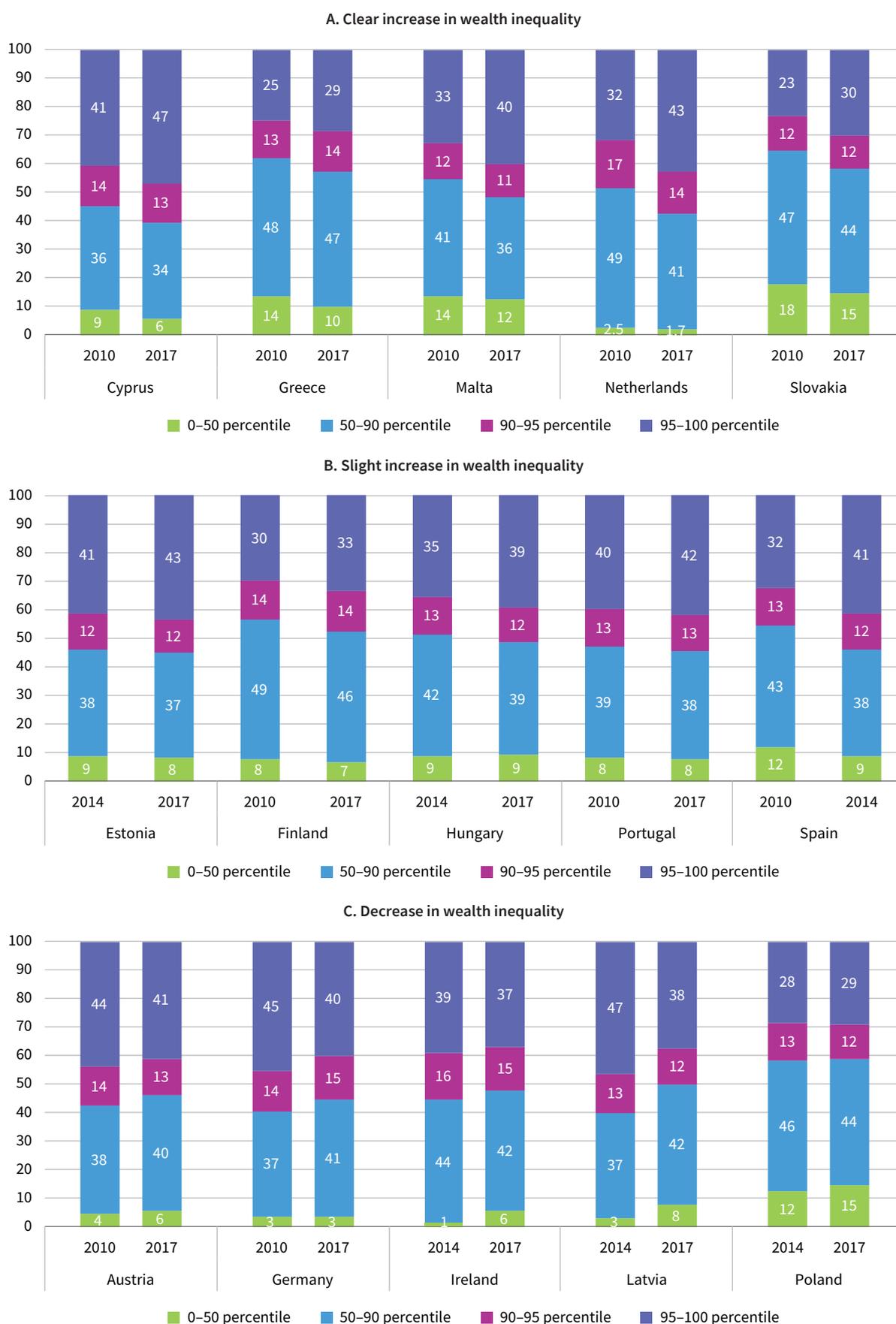
coefficient indicated a clear increase in wealth inequality from 2010 to 2017 (seen in Figure 3A). For example, the wealth share of the top 5% increased from 41% to 47% in Cyprus and from 32% to 43% in the Netherlands from 2010 to 2017, while the wealth shares of the bottom 50% fell from 9% to 6% in Cyprus and from 2.5% to 1.7% in the Netherlands. In all five countries, the wealth shares of the middle 50–90% of the wealth distribution also declined, suggesting that the gains of the richest were at the expense of both the poor and the middle class in terms of wealth.

The corresponding conclusion applies to those countries for which the Gini index suggested a decline in wealth inequality: in Ireland, Latvia and Poland, the wealth shares of the bottom 50% increased, while the wealth shares of the richest 10% either declined (Latvia) or remained unchanged (Poland – Figure 5C). In Germany, where there was only a slight decline in the Gini coefficient, the wealth shares of the bottom 50% remained practically unchanged (3.49% in 2010 versus 3.46% in 2017), while the wealth shares of the richest 5% declined from 45% to 40%.

¹² By using a novel data-driven approach to identifying offshore financial centres (OFCs) based on the global corporate ownership network including data on over 98 million firms, Garcia-Bernardo et al (2017) identified 24 'sink-OFCs', namely countries that attract and retain foreign capital through low taxation and lenient regulation, and five major 'conduit-OFCs': countries that are attractive intermediate destinations in the routing of international investments and enable the transfer of capital without taxation. The Netherlands was found to be one of the five major global conduit-OFCs, while Cyprus is primarily used by Russian companies owned from the British Virgin Islands, which is among the five largest sink-OFCs.

¹³ Note that Poland was not included in the first edition of the HFCS and therefore it is not included in the correlation and regression calculations mentioned.

Figure 5: Wealth shares over time, HFCS countries (%)



Note: The bars show the wealth shares of certain quantiles of the wealth distribution. For example, the green sections show the wealth shares of the bottom 50% of the population in the total net wealth of the country.
Source: Calculations based on the 2010, 2014 and 2017 HFCS

Key points

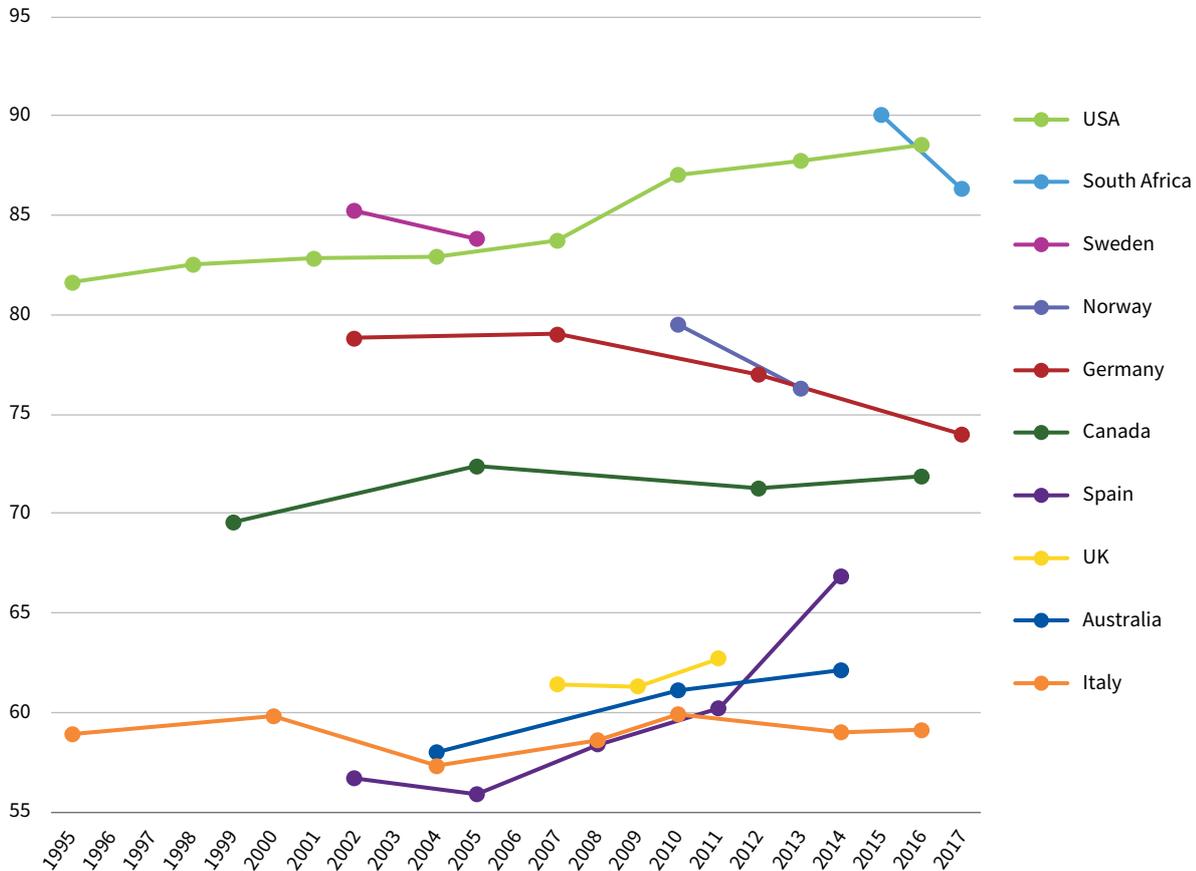
- Wealth inequality among Europeans overall is large, while within-country wealth inequality varies considerably across countries.
- Within-country wealth inequality in the EU is lowest in most of the eastern and southern European Member States: Poland, Slovakia, Slovenia, Lithuania, Greece, Malta, Italy and Croatia. In contrast, wealth inequality is the highest in some western European Member States: the Netherlands, Germany and Austria. Cyprus, having the third highest wealth inequality among the HFCS countries, is an exception to the south-east versus west divide in wealth inequality.
- The analysis of wealth inequality in the aggregate of the 14 countries included in all three editions of the HFCS reveals that wealth inequality is predominantly determined by within-country inequality.
- In the aggregate of those 14 countries that were included in all three editions of the HFCS, wealth inequality indices barely changed in the period 2010–2017, which masks different changes in individual EU Member States.

- An analysis of changes over time shows that countries with higher initial levels of inequality tend to experience decreases in inequality and countries with lower initial levels experience an increase, with a few exceptions.
- Variations in wealth inequality across the short time considered are, however, small: only four countries had a statistically significant increase in the time span considered – Finland, Greece, Slovakia and Slovenia – and two had a significant decrease – Latvia and Poland.

Recent changes in wealth inequality: International comparisons

For the comparison of EU and non-EU countries, a single dataset that provides harmonised estimates is used: the Luxembourg Wealth Study (LWS). Figure 6 shows that wealth inequality in the USA has been increasing since 1995 and its level is much higher than in EU countries. Wealth inequality was the highest in South Africa among the LWS countries around 2015, but it fell slightly in subsequent years, at which point the USA took over as the LWS country with the greatest wealth inequality.

Figure 6: Net wealth inequality within and outside the EU, LWS countries (Gini coefficient)



Note: As the underlying microdata and the data harmonisation processes used by the LWS differ from those in the HFCS, the Gini coefficients reported in this figure for Germany, Italy and Spain differ from the HFCS-based Gini coefficients reported elsewhere in this report.
Source: LWS

Data for Sweden are available only for the first part of the 2000s, when Sweden was the most unequal EU country for which data were available. In addition, no EU countries have reached the level of wealth inequality that Sweden had in the early 2000s. Among countries with more recent observations, Germany has the third greatest wealth inequality after the USA and South Africa, suggesting a high level of German wealth inequality in a global perspective too. Canadian wealth inequality is somewhat below the German level, while Australia, Italy, Spain and the UK are characterised by comparatively lower levels of wealth inequality.

Key points

- There were diverse changes in wealth inequality in non-EU countries.
- Wealth inequality in the USA has been increasing since 1995 and its level is much higher than in EU countries.
- Wealth inequality was the highest in South Africa among the LWS countries around 2015, but it fell slightly in the following years, at which point the USA became the LWS country with the greatest wealth inequality.
- Wealth inequality scarcely changed in Canada (a relatively high level of inequality) and the UK (a relatively low level of inequality); there was some increase in Australia but from a rather low level of inequality.
- The EU countries are diverse in their levels of wealth inequality and there does not seem to be an evident 'European pattern'; for example, Germany now has the third highest level of wealth inequality among the 10 LWS countries considered, while wealth inequality in Italy and Spain is low within a global comparison.

Differences in absolute wealth levels across European countries

In addition to large differences in wealth concentration and inequality, there are enormous differences in the absolute level of wealth between European countries. However, the limitations of net wealth comparability across countries have to be highlighted; the limitations are related to an uneven proportion of unrepresented wealth. Vermeulen (2016) estimates that between 6% (Belgium) and 47% (the Netherlands) of net wealth was not captured (missing) in the 2010 HFCS (Table 1). Thus, as almost half of Dutch net wealth is not reflected in the HFCS, while only 6% of Belgian net wealth is not reflected in the survey, cross-country comparability is seriously compromised. By comparing the HFCS data with balance sheets of households in national accounts, Krenek and Schratzenstaller (2018) conclude that, due to non-reporting and underreporting, on average 74% of financial assets and 40% of liabilities were missing in the 2017 HFCS. Total asset values only marginally changed between the second and third editions and hence a significant part of overall wealth is probably not captured in the third edition of the HFCS either.

Keeping this major limitation in mind, the average net wealth in Luxembourg (€375,288) is almost 20 times higher than the average wealth in Latvia (€19,249) (Table 2). The second richest country in terms of average net wealth is Cyprus (€182,741), followed by Belgium (€164,573), Malta (€158,468) and Ireland (€137,553). The poorest countries in terms of average net wealth after Latvia include Hungary (€30,227), Poland (€33,933), Slovakia (€36,593), Greece (€37,388), Croatia (€38,915) and Lithuania (€40,847). Thus, the country differences in average net wealth are much larger than the differences in average gross domestic product (GDP) per capita, even when the latter were measured in terms of current prices.

Table 1: Missing wealth in the first edition of the HFCS, 2010 (%)

	Real assets	Financial assets	Liabilities	Net wealth
Austria	-8	62	59	12
Belgium	-21	42	24	6
Finland	-1	63	12	22
France	17	61	33	32
Germany	15	58	29	30
Italy	-5	80	60	23
Netherlands	13	68	16	47
Spain	16	63	39	24

Note: Values show the percentage difference in assets, liabilities and net wealth between national accounts and the HFCS. Positive values indicate that national accounts include higher values than the HFCS.

Source: Table 1 in Vermeulen (2016)

Table 2: Average net wealth by net wealth percentiles and by country, 21 HFCS countries, 2017 (€)

Country	Total	0–20	20–40	40–60	60–80	80–95	95–99	Top 1%
Luxembourg	375,288	4,870	66,573	169,151	344,151	715,853	1,776,256	7,991,106
Cyprus	182,741	-4,433	28,016	69,267	138,261	332,645	1,138,328	4,108,891
Belgium	164,573	1,725	33,131	78,481	152,807	332,375	872,739	2,657,799
Malta	158,468	10,443	48,355	83,198	130,665	260,630	782,207	3,355,261
Ireland	137,553	-3,456	18,327	59,650	129,230	305,700	724,884	2,195,254
Austria	117,637	-602	14,146	50,376	108,126	231,098	562,112	2,607,859
Germany	115,405	-3,260	8,618	39,371	104,664	257,891	638,222	2,131,357
France	108,382	-588	13,247	47,946	108,088	230,991	525,673	1,896,822
Finland	102,114	-2,389	16,338	50,567	108,169	224,108	494,992	1,416,091
Italy	90,845	1,310	19,561	50,780	95,151	189,671	433,300	1,170,163
Netherlands	86,398	-16,619	10,632	34,691	78,457	184,641	489,890	1,767,384
Portugal	64,920	440	12,486	28,206	54,828	122,902	308,533	1,495,101
Slovenia	58,408	1,023	17,649	34,743	59,133	112,869	259,861	857,344
Estonia	50,961	998	10,177	22,422	42,276	90,378	259,495	1,184,953
Lithuania	40,847	3,089	12,618	22,100	35,967	71,600	217,246	666,199
Croatia	38,915	1,486	10,204	20,900	37,380	70,852	159,945	789,562
Greece	37,388	-1,412	9,952	23,251	41,146	80,344	171,981	387,034
Slovakia	36,593	2,984	13,347	23,453	37,837	66,901	150,078	503,112
Poland	33,933	2,531	12,571	22,192	34,808	63,969	134,489	453,771
Hungary	30,227	549	6,753	14,792	26,609	56,979	142,746	622,925
Latvia	19,249	-177	3,461	9,552	18,613	36,103	103,659	339,736

Notes: The net wealth shown is the household wealth divided by the number of people living in the household (see Box 1). The header line refers to net wealth percentiles. For example, 1–100 is the total population, 0–20 is the bottom 20% of the population and so on, and 100 (in the final column) is the top 1%. Countries are ordered according to average net wealth in the total population. Estimates are given of the nominal euro value.

Source: Calculations based on the 2017 HFCS

The differences across the quantiles are also huge. In nine countries, the average net wealth of the bottom 20% of the population is negative (analysed in some detail in relation to Figure 2). The bottom 20% is the only quantile category in Table 2 in which Luxembourg is not the leader; the bottom 20% in Malta is on average (€10,443) richer than the bottom 20% in Luxembourg (€4,870). In several countries, the average net wealth of the bottom 20% is around or below €1,000, suggesting that these people have hardly any savings. In contrast, the top 1% in terms of net wealth own almost €8 million in Luxembourg, highlighting the huge gaps in wealth holdings.

Considering 20 countries, the middle classes, such as those in the 41–60 percentiles bracket, hold on average between €9,552 in Latvia and €83,198 in Malta, with Luxembourg holding significantly more again with €169,151. Thus, the wealth of the middle class also varies widely across Europe.

Mean values can be affected by large outliers and hence median net wealth was also taken into consideration (Table 3). Indeed, the median net wealth of the bottom 20% of the population is negative in only one country – the Netherlands – in contrast to nine countries when considering the mean. This suggests that some people have large negative net wealth, which drives the average below zero in seven countries, even though more than half of the bottom 20% has positive, although small, net wealth. The country differences are again huge among wealth-poor people: while the median net wealth of the poorest 20% is just €1 in Latvia, it is close to €9,000 in Malta.

The differences between the mean and median net wealth of the 41–60 percentiles are relatively small, but again this difference is very large for the top 1%. This suggests that the distribution of net wealth in the top 1% is also highly right-skewed, that is, even among the richest 1%, some people are extremely rich.

Table 3: Median net wealth by net wealth percentiles and by country, 21 HFCS countries, 2017 (€)

Country	Total	0–20	20–40	40–60	60–80	80–95	95–99	Top 1%
Luxembourg	170,688	3,867	66,204	171,057	339,974	666,800	1,645,826	4,142,720
Malta	81,223	8,889	47,884	81,223	125,167	230,789	704,247	2,931,742
Belgium	78,205	1,066	32,517	78,205	148,759	308,026	740,833	1,915,862
Cyprus	68,841	1,030	26,803	68,968	137,454	292,057	940,375	3,321,276
Ireland	57,980	440	17,895	58,196	125,946	286,272	695,080	1,583,734
Austria	50,344	1,507	13,230	50,416	103,955	215,557	516,635	1,559,164
France	46,915	1,136	12,200	47,003	105,646	215,448	490,861	1,184,887
Italy	50,250	1,000	19,388	50,250	93,139	179,025	410,000	1,010,000
Finland	50,071	200	15,401	50,115	106,511	209,893	463,186	1,124,058
Germany	39,110	108	7,373	39,145	99,750	237,100	593,990	1,625,270
Slovenia	34,489	828	17,861	34,549	57,607	105,146	235,607	709,138
Portugal	27,550	473	12,654	27,614	53,356	113,690	282,636	1,035,455
Netherlands	33,918	-159	10,123	33,978	75,601	171,839	436,309	1,393,747
Lithuania	22,361	3,813	12,665	22,420	35,388	66,602	185,340	541,567
Slovakia	23,304	3,160	12,980	23,357	37,398	62,646	140,439	398,107
Estonia	22,293	741	10,300	22,320	40,863	85,021	223,411	870,240
Croatia	20,524	1,228	10,215	20,555	36,878	67,305	146,403	363,311
Greece	23,487	438	9,928	23,504	40,221	75,529	160,219	323,311
Poland	22,001	1,782	12,565	22,008	34,001	61,110	127,676	309,064
Hungary	14,945	574	6,506	14,968	25,920	52,262	132,482	367,641
Latvia	9,552	1	3,467	9,596	17,992	33,965	87,631	215,447

Notes: See the notes to Table 2. Countries are ordered according to average net wealth in the total population.

Source: Calculations based on the 2017 HFCS

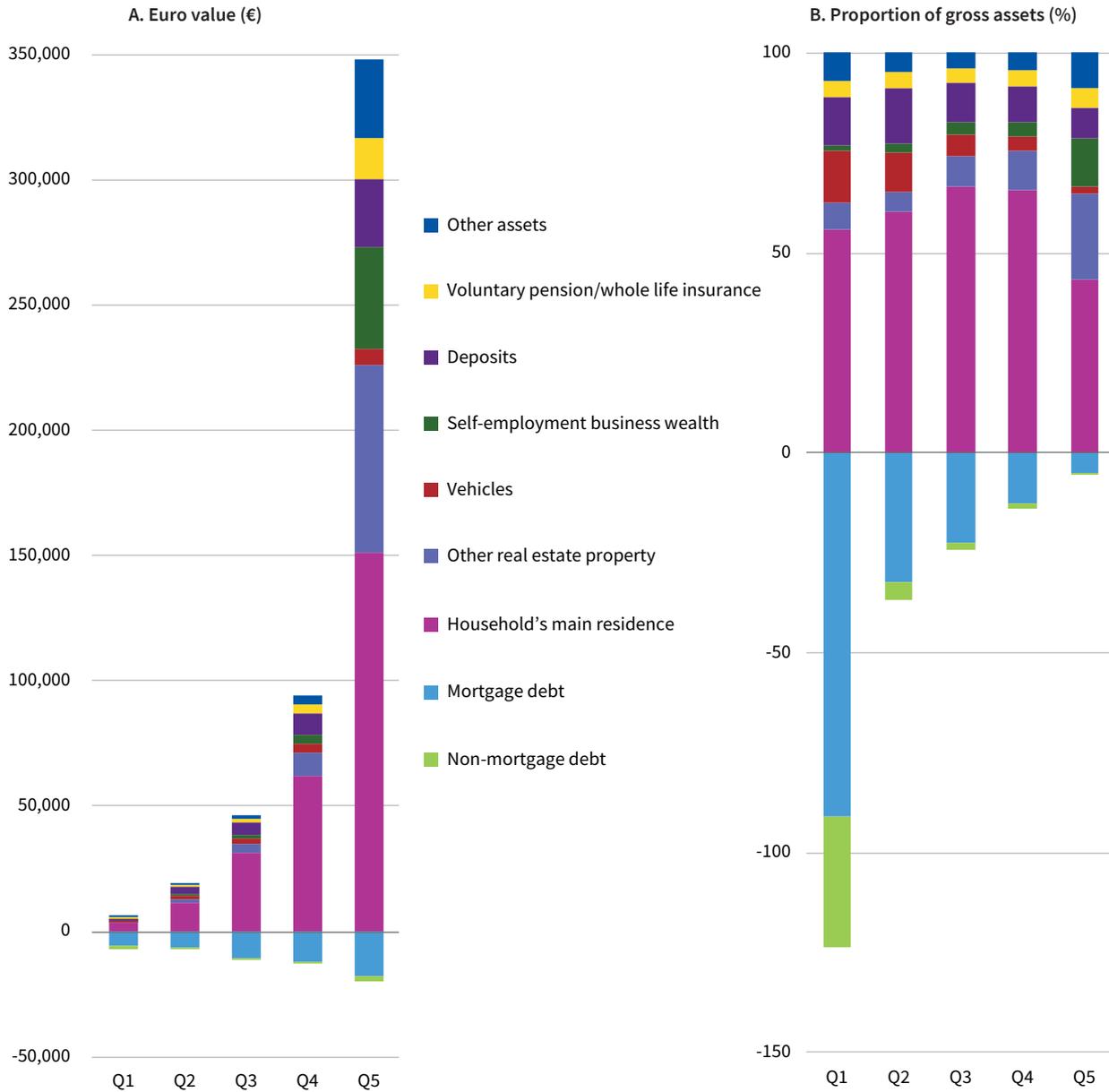
Key points

- On average, three-quarters of financial assets, 40% of liabilities and about a quarter of net wealth may be not captured by the HFCS, with large country variations, limiting the comparisons of absolute wealth levels across countries.
- Keeping this major limitation in mind, the average net wealth level is 20 times larger in Luxembourg than in Latvia. For comparison, if average gross incomes between the same countries were considered, the difference between the richest (Luxembourg) and the poorest (Lithuania) countries is ninefold.
- People in central European countries and in Greece tend to be much poorer than people in Luxembourg, Cyprus, Belgium and Malta.
- The cross-country differences are also huge if the poor (the bottom 20%) and the very wealthy (the top 1%) are compared between countries.
- The differences in net wealth are much larger than the differences in GDP per capita.
- The comparison of mean and median net wealth by wealth deciles reveals a large inequality within the poorest and the richest segments of society, while this is less so for mid-range wealthy people.

Wealth composition in the HFCS countries

The striking picture depicted in Figure 7 is the enormous difference between the average wealth of the poorest 20% and of the wealthiest 20% of society. If gross assets without liabilities are the focus, the top wealth quintile possesses 60 times more than the bottom wealth quintile. In addition, the average net wealth of the poorest quintile is negative. However, as indicated in Figure 2, 4.2% of people have negative net wealth and there is a relatively small group of people who have rather large negative net wealth, which makes the average for the bottom 20% on the negative scale.

Figure 7: Average portfolio by net wealth quintile, 21 HFCS countries, 2017



Note: The value of liabilities is reported by means of a negative sign.
 Source: Calculations based on the 2017 HFCS

On average, the household's main residence accounts for between 56% and 66% of total gross assets in the case of the bottom four quintiles of the population in terms of net wealth, while the household's main residence accounts for 42% of total gross assets of the wealthiest 20%, which is still a relatively large share. Owing to the prominent role of the household's main residence in wealth holding, this report devotes a whole chapter to homeownership (Chapter 3). Other real estate ownership is more significant for wealthier people and, while vehicles account for 13% of gross assets of the poorest quintile but only 2% of gross assets of the richest quintile, on average the value of vehicles held by the richest quintile is eight times larger than the value of vehicles of the bottom quintile.

Another distinctive feature of the wealthiest 20% is the large proportion of self-employed business wealth (12% of gross assets), while this figure is just 1% for the poorest 20%. The role of deposits is more important for the poor, while other assets (for example, shares, bonds and mutual funds) are more important for the wealthy. The only asset class that represents a similar proportion of gross assets across the five wealth quintiles is voluntary pensions/whole life insurance, with a proportion between 4.2% and 4.8%, suggesting that all levels of society are involved. However, the average European value masks sizeable country differences (see the next section 'Clusters of EU countries in terms of wealth composition').

Table 4: Composition of household assets and liabilities, 21 HFCS countries, 2017

	Incidence (% of households that own or owe the items listed)	Conditional median (€)	Conditional mean (€)
Total assets		106,580	234,810
Total real assets	91	109,240	210,130
Household's main residence	61	150,000	194,180
Other real estate property	22	80,130	182,860
Vehicles	75	5,290	9,560
Valuables	44	3,000	9,910
Self-employment business wealth	11	29,980	184,920
Total financial assets	96	9,140	45,270
Deposits	96	5,710	20,870
Mutual funds	10	13,480	48,070
Bonds	3	19,400	47,570
Traded shares	7	8,000	41,390
Money owed to households	6	2,290	10,490
Voluntary pensions/whole life insurance	29	10,060	36,190
Other financial assets	7	8,550	40,780
Total liabilities	42	20,000	66,360
Mortgage debt	40	76,610	111,720
Non-mortgage debt	21	4,010	11,590

Notes: The conditional mean and median consider only households that have a particular asset or liability. The categories of assets listed refer to household wealth; the percentages refer to the proportion of households in the HFCS countries.

Source: Calculations based on the 2017 HFCS

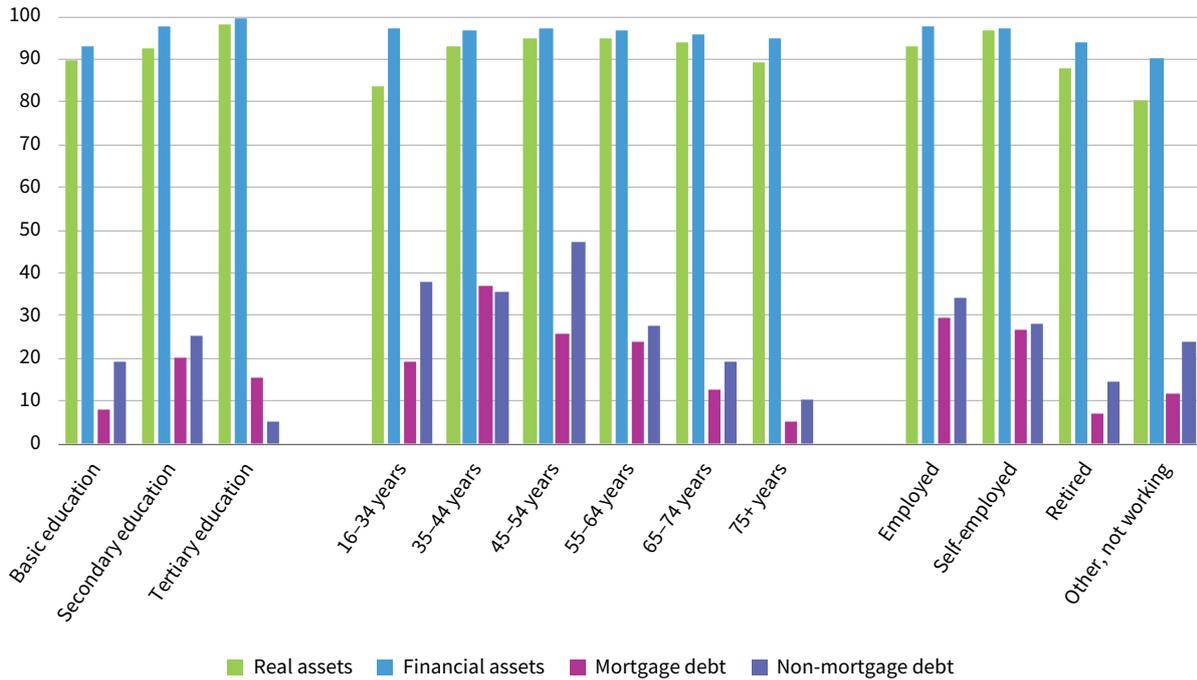
Regarding liabilities, mortgage debt strongly dominates non-mortgage debt for all quintiles, yet non-mortgage debt is also rather significant for the poorest quintile, accounting for 33% of gross assets.

However, average values might mask a large degree of heterogeneity, because some people do not own a particular asset and hence they contribute zero values to the average. Table 4 documents the incidence (the proportion of people holding a certain type of asset or having a certain type of liability) and the median and mean values for those who have an asset or a liability. Real assets are dominated by the household's main residence for the 61% of the population who are homeowners. The median value of the household's main residence is €150,000, while the mean value is €194,180 (considering only those who own their main residence). One-quarter of European citizens own another property, three-quarters own a vehicle and slightly less than half own valuables. The median and mean values of vehicles and valuables are dwarfed by the value of real estate.

As regards financial assets, at least one person in almost every household (96% of households) has bank deposits and slightly less than one-third of the population has voluntary pension savings or whole life insurance. The incidence of other types of financial assets amounts to 10% or less, although among those who have mutual funds, bonds, shares or voluntary pensions, the median value of these savings is higher than the median value of bank deposits, suggesting that the wealthiest people diversify their financial assets. The differences in mean values are similar. The often large gap between mean and median values is a reflection of wealth inequality, as it reflects that the distribution of asset holdings is highly right-skewed (that is, richer people hold so much more than poorer people).

The composition of asset holdings also varies along various socioeconomic dimensions (Figure 8). For ease of data presentation, assets are grouped into two broad categories: real assets (real estate, vehicles, valuables and self-employed business wealth) and financial assets (deposits, mutual funds, bonds, shares, loans to other people, pensions and insurance).

Figure 8: Incidence of household asset holdings and debt liabilities, 21 HFCS countries, 2017 (%)

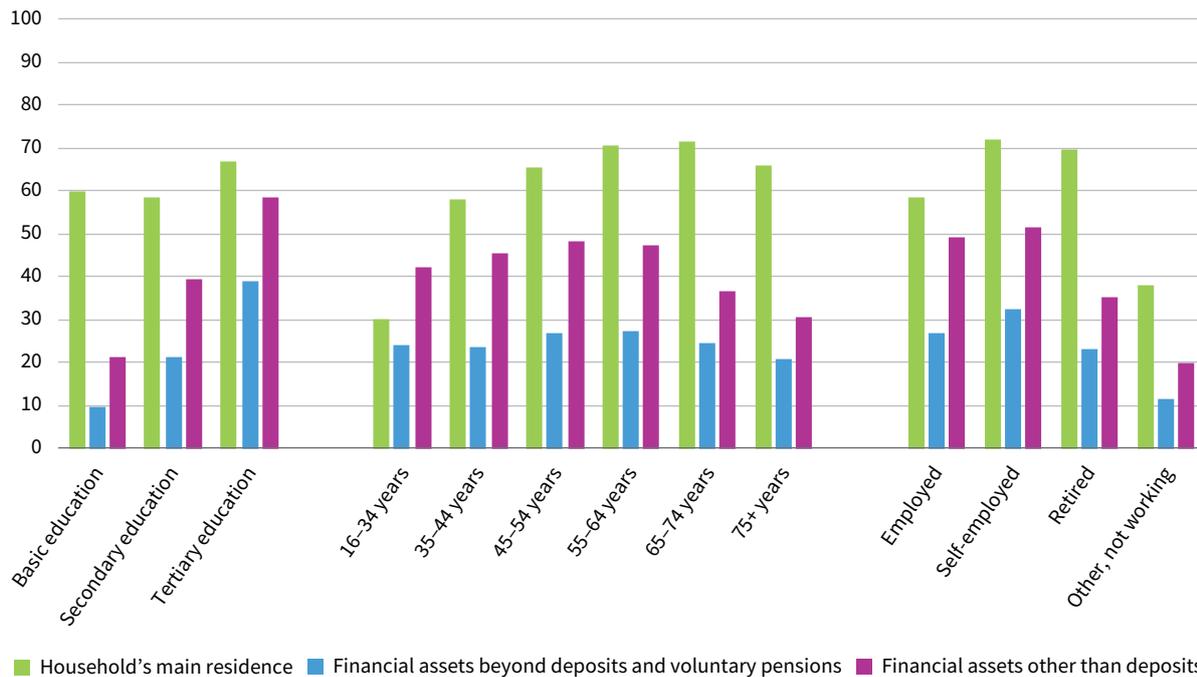


Note: This figure shows estimates for households (using the household reference person) of different educational levels, ages and work statuses.
Source: Calculations based on the 2017 HFCS

Irrespective of age, education and type of economic activity, the majority of households in the EU hold some kind of financial and real assets. Financial asset holdings are very common: around 97–98% for all age

cohorts. The incidence of any real asset holdings is also rather high, with the lowest (but still high) rate of 83% observed for households headed by people belonging to the 16–34 age cohort (considering the age of the

Figure 9: Incidence of certain types of household assets, 21 HFCS countries, 2017 (%)



Note: This figure shows estimates for households (using the household reference person) of different educational levels, ages and work statuses. The types of assets considered are listed in Table 4.
Source: Calculations based on the 2017 HFCS

reference household person). Education matters little, although people with higher education have a slightly higher rate of incidence of asset holdings. For financial assets, homeownership status (not shown) and employment status do not matter either, while, for real assets, renters and those who are not working have incidence rates somewhat below 80% (there is more information on the wealth composition of households according to housing status in Chapter 3).

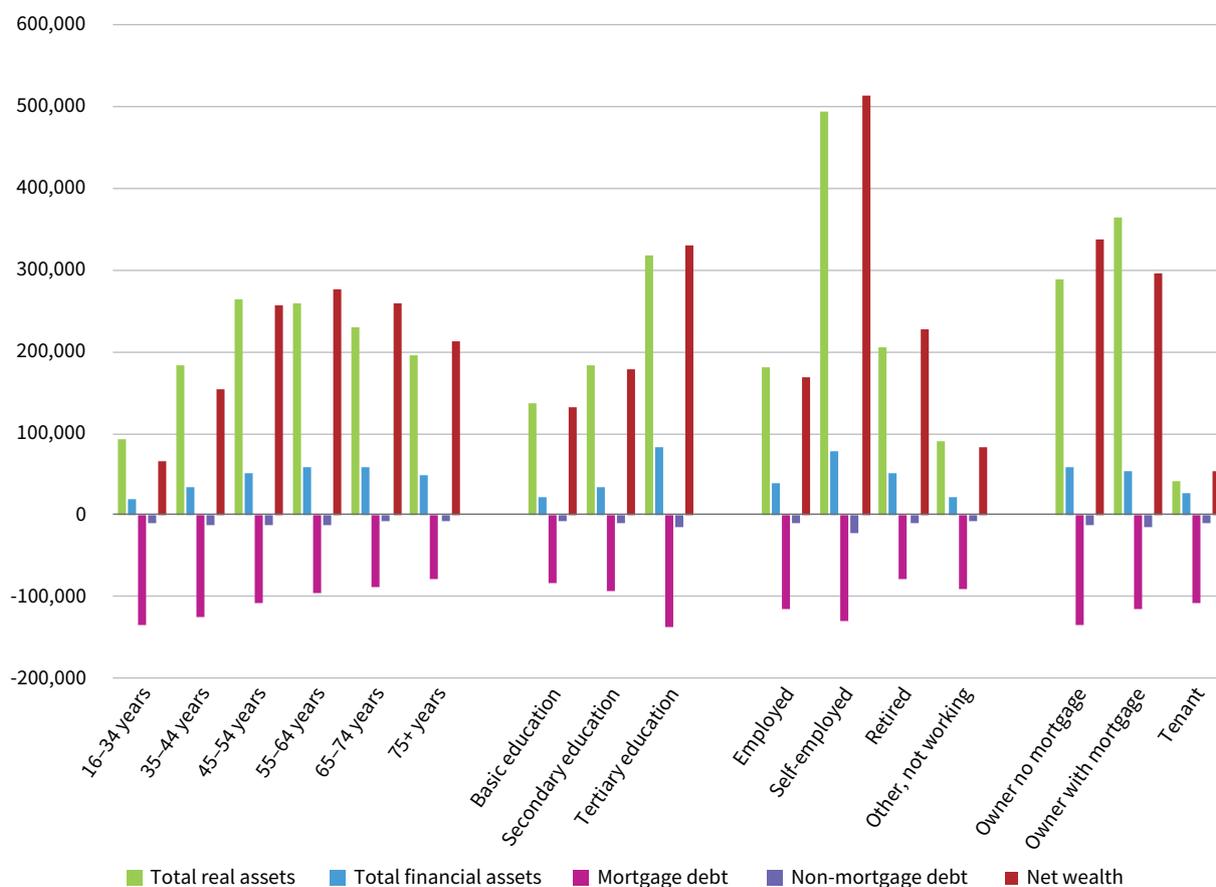
However, once financial assets are broken down further, education becomes relevant. Indeed, higher education is associated with a higher incidence of financial assets beyond deposits and also beyond deposits and voluntary pensions (Figure 9).

The incidence of having debt is much lower than the incidence of having assets, and there are important differences across socioeconomic groups (Figure 8). Mortgage debt incidence is reverse U-shaped, whereby about 40% of those between 35 and 54 years of age have mortgage debt, while only 20% of the younger generation (aged between 16–34 years) and only 3% of the oldest generation (75+ years) have mortgage debt.

Education matters, as those with a higher level of education have a much higher likelihood of having mortgage debt than those who have a low level of education. Finally, about 30% of those who are employed or self-employed have mortgage debt, while very few of the retired and non-working segments of society have mortgage debt, which is rather obvious. The incidence of non-mortgage debt is broadly similar, although the youngest cohort (16–34 years) has a similar rate of incidence (slightly below 40%) as the 35–54 age cohort.

In contrast to incidence, which is universally high, for example for asset holdings, the mean value of asset holdings, debt liabilities and net wealth differs enormously across socioeconomic groups (Figure 10). The mean value of real asset holdings of households headed by young cohorts (16–34 years) is about €92,000, while for older cohorts it ranges between €182,000 and over €263,000. The value of financial assets is much smaller in each cohort, underlining that wealth is typically held in real assets (which is in turn dominated by the ownership of the household's main

Figure 10: Mean value of household asset holdings and debt liabilities, 21 HFCS countries, 2017 (€)



Note: This figure shows estimates for households (using the household reference person) of different educational levels, ages, and work and housing statuses.

Source: Calculations based on the 2017 HFCS

residence, as indicated in Figure 7). By age cohorts, the average value of financial assets ranges from about €19,000 for the 16–34 age cohort to over €57,000 for the 55–64 and 65–74 age cohorts. Individuals with tertiary educational attainment have real assets of over twice the value of those of people with a basic education (€316,766 versus €135,679, respectively), while their mean financial asset value is nearly four times larger (€82,684 versus €22,740, respectively). The assets of homeowners are much larger than those of renters (the next chapter on homeownership details these results further). Those who do not work are much poorer than those who work or have retired.

Unsurprisingly, the average mortgage debt declines with age, from €134,240 for the youngest cohort to €77,606 for the oldest cohort, as borrowers gradually pay back their loans. Non-mortgage debt is small compared to mortgage debt; it is highest for the 45–54 age group (€13,366) and smallest for the 75+ group (€7,994). Higher educated people finance more expensive homes and have more debt than people with only a basic education. In net terms, higher educated people are more than 2.5 times as well-off as low-educated people. Since differences in asset values are larger than differences in debt, the pattern for net wealth broadly follows the patterns seen for assets.

Key points

- The top wealth quintile possesses 60 times more assets than the bottom wealth quintile.
 - The household's main residence is the dominant component of asset holdings.
 - The wealthiest 20% has a large proportion of self-employed business wealth (12% of gross assets) – which is in line with the earlier finding that the wealthiest 'incorporate' themselves to lower the tax burden – while this figure is just 1% for the poorest 20%.
 - The role of deposits is more important for the poor, while other assets (for example, shares, bonds and mutual funds) are more important for the wealthy.
 - The only asset class that represents a similar proportion of gross assets across the five wealth quintiles is voluntary pensions/whole life insurance, with a proportion around 5% of total assets, suggesting that all levels of society are involved.
 - Mortgage debt strongly dominates non-mortgage debt for all quintiles, yet non-mortgage debt is also rather significant for the poorest quintile, accounting for 35% of gross assets.
 - Almost everyone (98% of households) has bank deposits and slightly less than a third of the population has voluntary pension savings or whole life insurance, while the incidence of other types of financial assets amounts to 10% or less.
- The composition of asset holdings and liabilities varies along various socioeconomic dimensions.
 - Higher education is associated with a higher incidence of financial assets beyond deposits and voluntary pensions.
 - Mortgage debt incidence is reverse U-shaped in terms of age: while about two-fifths (37%) of those between 35 and 54 years of age have mortgage debt, this is true of only under 20% of the younger generation and 5% of the oldest generation.
 - Those with higher education and those with an employment status are much more likely to have mortgage debt than those who have a low level of education and who are retired or not working.
 - The incidence of non-mortgage debt is broadly similar to that of mortgage debt.
 - Beyond incidence, the mean value of asset holdings and liabilities differs enormously across socioeconomic groups.

Clusters of EU countries in terms of wealth composition

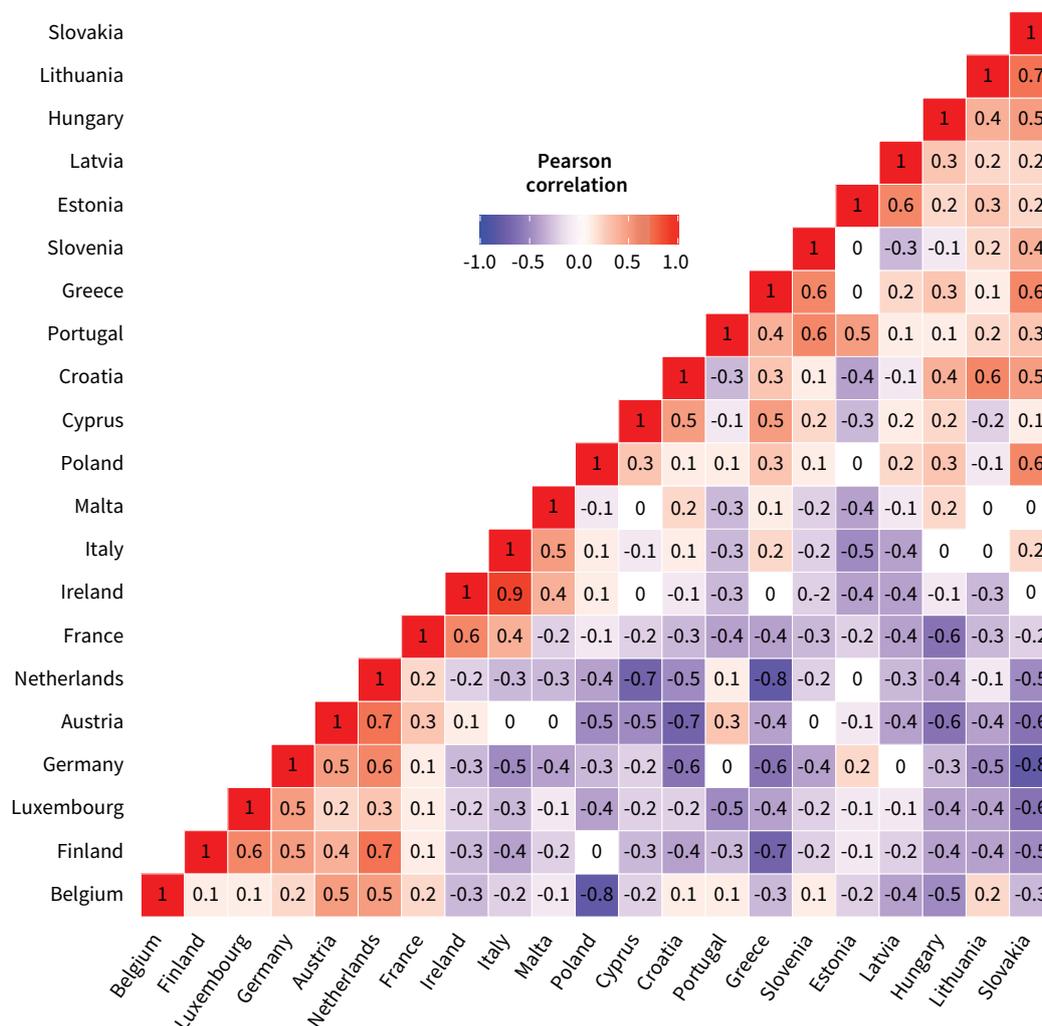
The previous section analysed the composition of wealth and its socioeconomic characteristics for the aggregate of the 21 countries included in the HFCS; however, there are major country-specific differences.

Obviously, describing country specificities to the same degree as was done for the aggregate of all countries would be rather lengthy (although country breakdowns are available upon request). Figure 11 provides a summary of how similar countries are in terms of wealth composition on the basis of the proportion of individuals who have different assets (as analysed for all 21 countries in Table 4).

There are two groups of countries that have similar asset compositions: the first group consists of Austria, Germany and the Netherlands; the second group, which is made up of countries that have asset compositions substantially different from the first group but similar to each other, consists of Estonia, Latvia, Lithuania and Slovakia. The countries in the first group have high levels of wealth inequality, while those in the second group have low levels of wealth inequality, with the exception of Estonia. A particular feature of the second cluster (Estonia, Latvia, Lithuania and Slovakia) is that the household's main residence is the most prevalent asset in its portfolio.

Asset composition across the population appears to be associated with wealth inequality. Indeed, if only certain groups, typically the wealthier groups, are able to access a wider range of, and therefore higher yield, assets, wealth inequality might be exacerbated.

Figure 11: Correlation between countries of aggregate asset composition, 21 HFCS countries, 2017 (Pearson correlation)



Notes: This figure shows the Pearson correlation between countries in terms of the incidence of 15 classes of assets; 14 of these assets are included in Table 4 (excluding total assets) and the other is the incidence of financial assets other than deposits and voluntary pensions/whole life insurance. A correlation value close to 1 (dark red) indicates that the two countries have a similar incidence across the 15 asset classes. A correlation value close to -1 (dark purple) indicates that the two countries have opposing incidences, that is, when an asset class has a high incidence in one of the countries, it has a low incidence in the other. A correlation close to 0 implies that there is no systematic association between the incidence of asset classes in the two countries, and hence the two countries are rather different in terms of asset composition. **Source:** Calculations based on the 2017 HFCS

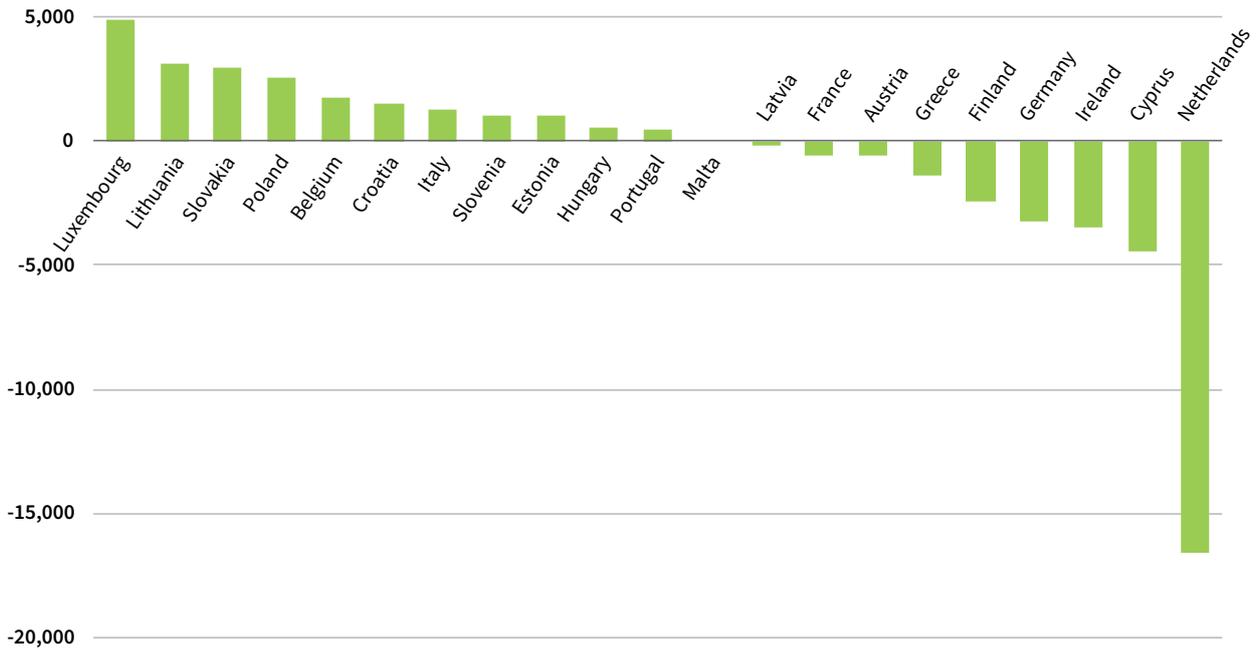
There are two important patterns: 1) countries with a (lower) higher incidence of homeownership have (higher) lower levels of wealth inequality and 2) countries with a lower (higher) prevalence of financial assets other than deposits and voluntary pensions/whole life insurance exhibit lower (higher) levels of wealth inequality.

Chapter 3 delves into an analysis of homeownership and helps explain some of the findings of Kaas et al (2019) and the OECD (forthcoming), which highlighted that more widespread homeownership is associated with lower inequality, as it is related to a higher proportion of wealth held particularly by the bottom quintiles of the distribution. Figure 12 shows the

average net wealth of the bottom 20% of the wealth distribution in 2017.

While Figure 7 showed that the proportion of voluntary pensions and/or whole life insurance in the euro value of total gross assets was rather similar in all five net wealth quintiles in the aggregate of 21 countries (at 4–5%), there is a very substantial variation across countries. The proportion of people with voluntary pensions and/or whole life insurance is 43% in Belgium and Germany, 39% in Poland and 38% in France but less than 1% in Greece, 6% in Croatia and Hungary, 8% in Italy and 9% in Latvia. While there are some exceptions (such as Poland), more western European citizens seem to save for their old age than central, eastern and

Figure 12: Average net wealth of the bottom quintile of the wealth distribution, 21 HFCS countries, 2017 (€)

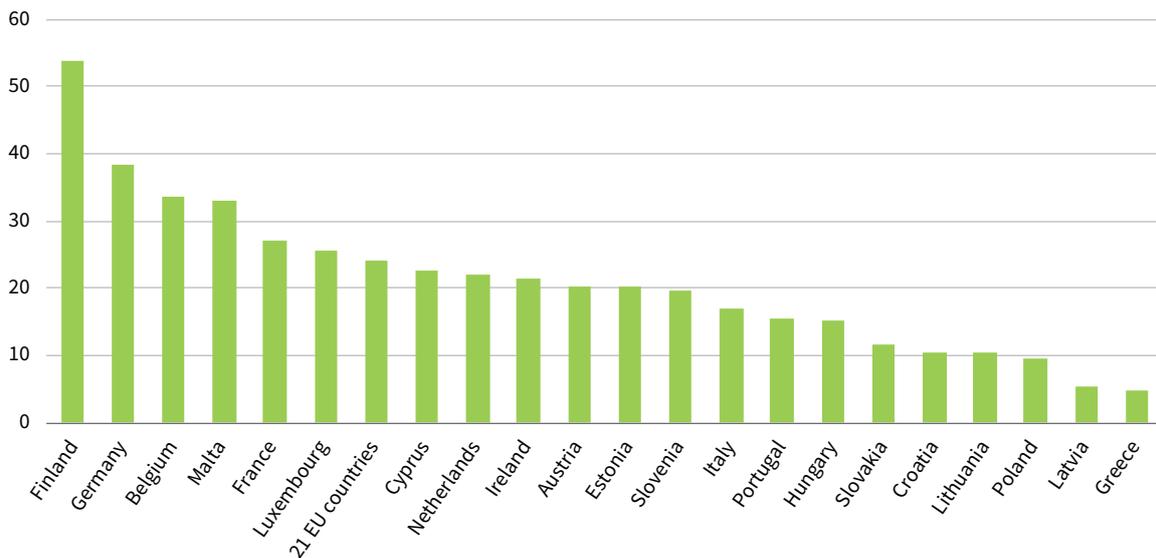


Note: The countries are ordered from the highest to the lowest net wealth.
 Source: Calculations based on the 2017 HFCS

southern European citizens. This difference could possibly be explained by differences in affluence, but access to and the adequacy of voluntary instruments for income after retirement should also be considered by policymakers in the context of these differences.

Still, on average, voluntary pensions and/or whole life insurance is the second most widely held instrument after deposits. Regarding financial assets other than deposits and voluntary pensions/whole life insurance, substantial cross-country variation is observed (Figure 13).

Figure 13: Incidence of financial assets other than deposits and voluntary pensions, 21 HFCS countries, 2017 (% of households)



Source: Calculations based on the 2017 HFCS

Individuals who are wealthy might have easier access to high-yield assets, which, in turn, increases their wealth. In the Netherlands, it is those other assets (for example, mutual funds and shares) that appear to particularly distinguish the top quintile. In countries with lower wealth inequality, such as Poland and Slovakia, the top wealth quintile also appears to have a somewhat different asset portfolio, with self-employment business wealth playing a relatively more important role than financial assets beyond deposits and voluntary pensions.

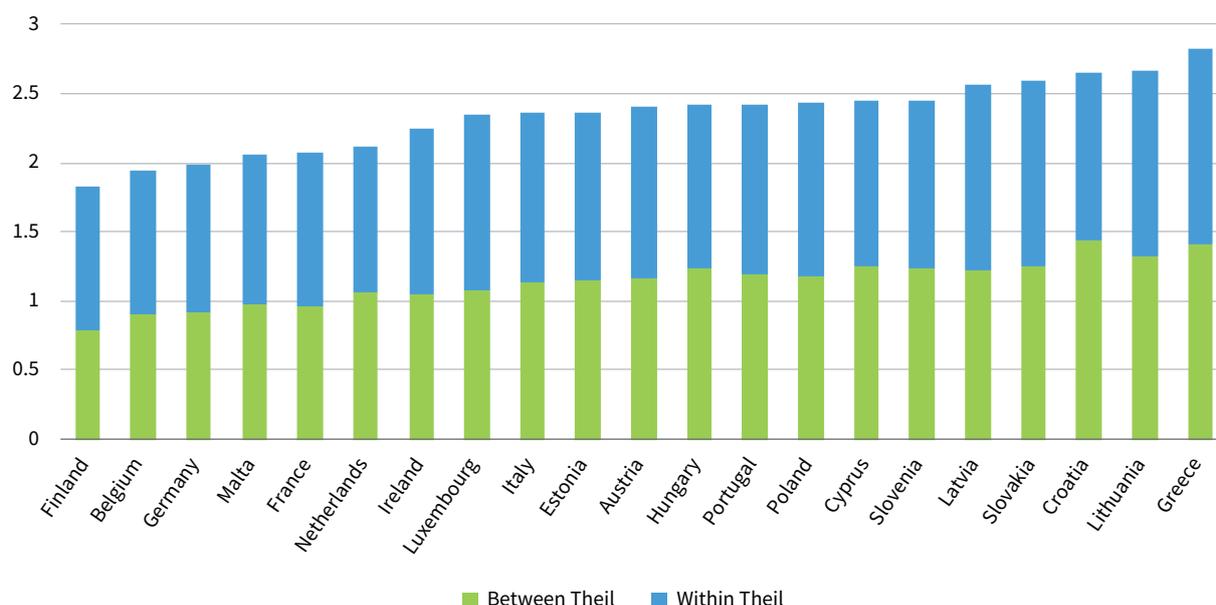
Portfolio diversification

A first look at Panel A of Figure 15 suggests that the top wealth quintile in Finland, Belgium and Germany holds a more diversified portfolio than in Croatia, Lithuania and Greece, for example, as in the former countries there are more individuals who hold a range of different assets, with a similar amount of wealth held in these various assets. Here, portfolio diversification cannot be measured in a strictly financial sense, as each asset's risk profile or expected return is not known. Some of the

assets considered, such as deposits, might not yield any return whatsoever. Therefore, a high level of diversification, as measured by the Theil index in this study, might not be synonymous with optimal diversification, which corresponds to optimal consideration of risks versus returns. To measure each household's portfolio diversification, the Theil index is calculated. Two ways to diversify a portfolio are considered: by investing in a new asset class ('between Theil') and by reequilibrating the shares of wealth in each of the asset groups ('within Theil'). The sum of these components is an overall measure of diversification (this follows the strategy set out by Cadot et al, 2011; Figure 14).

The research examined nine groups of assets: real estate, valuables, deposits, voluntary pensions/whole life insurance, mutual funds, shares, bonds, non-self-employment private business and shared accounts as the possible assets. On average, households in countries with higher wealth inequality have more diversified portfolios.

Figure 14: Average household portfolio diversification, 21 HFCS countries, 2017 (Theil index)



Notes: In this figure, a higher value signifies a less diversified portfolio, with a higher 'between Theil' indicating less diversification in terms of the number of assets invested, and a higher 'within Theil' indicating a higher concentration of wealth in just a few of the assets in which households invest. Countries are ordered from most diversified to least diversified.

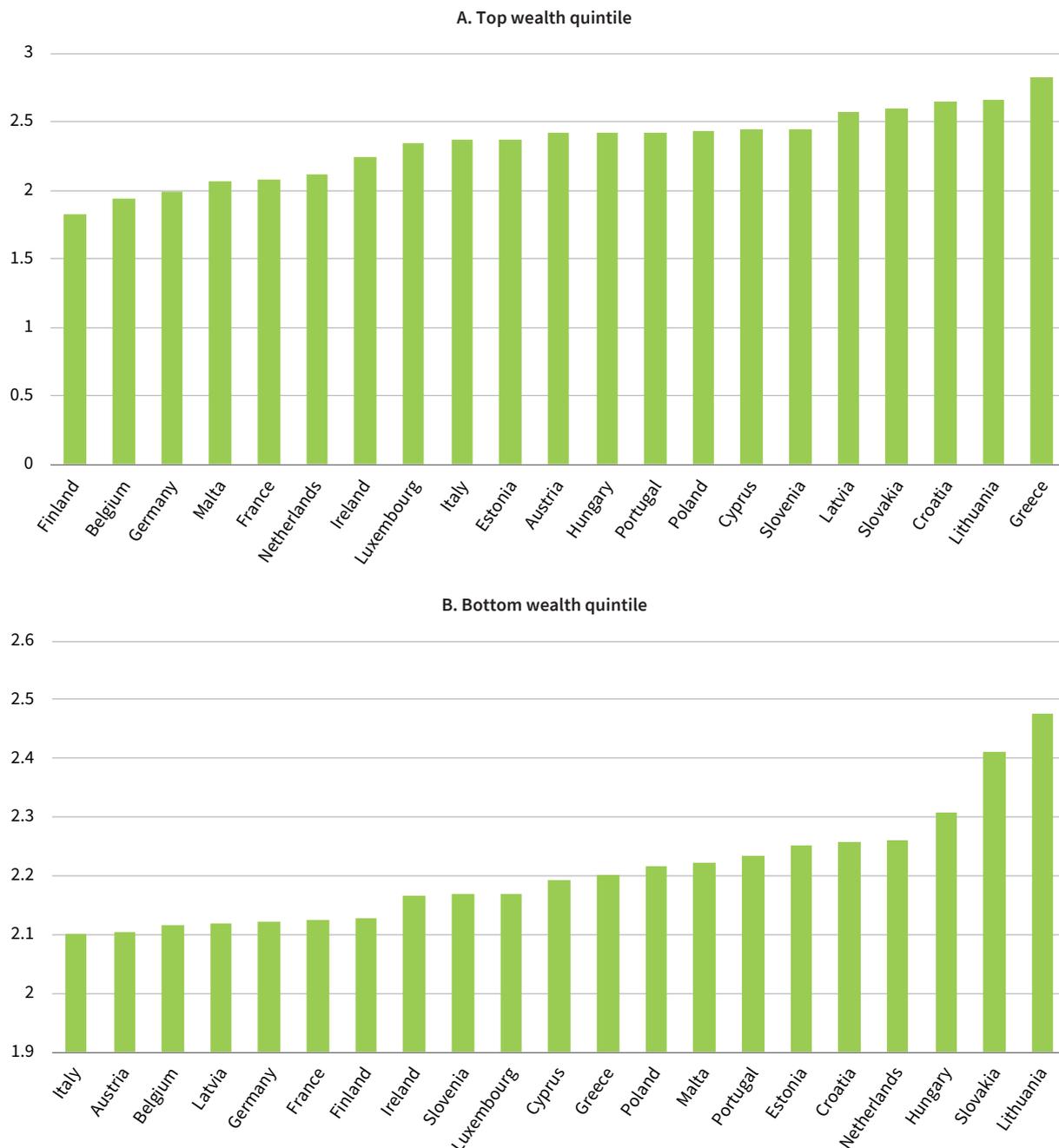
Source: Calculations based on the 2017 HFCS

Looking at portfolio diversification by wealth quintile allows this result to be further investigated (Figure 15). It is in the countries with the highest wealth inequality in particular that the top wealth quintile has the most diversified wealth. In the bottom quintile, differences in diversification between countries are substantially smaller and do not follow any clear pattern in terms of the levels of wealth inequality. The top quintile's wealth is more diversified in more unequal countries in

both ways: it holds more types of assets and it has more similar proportions of wealth invested in each (Figure 16).

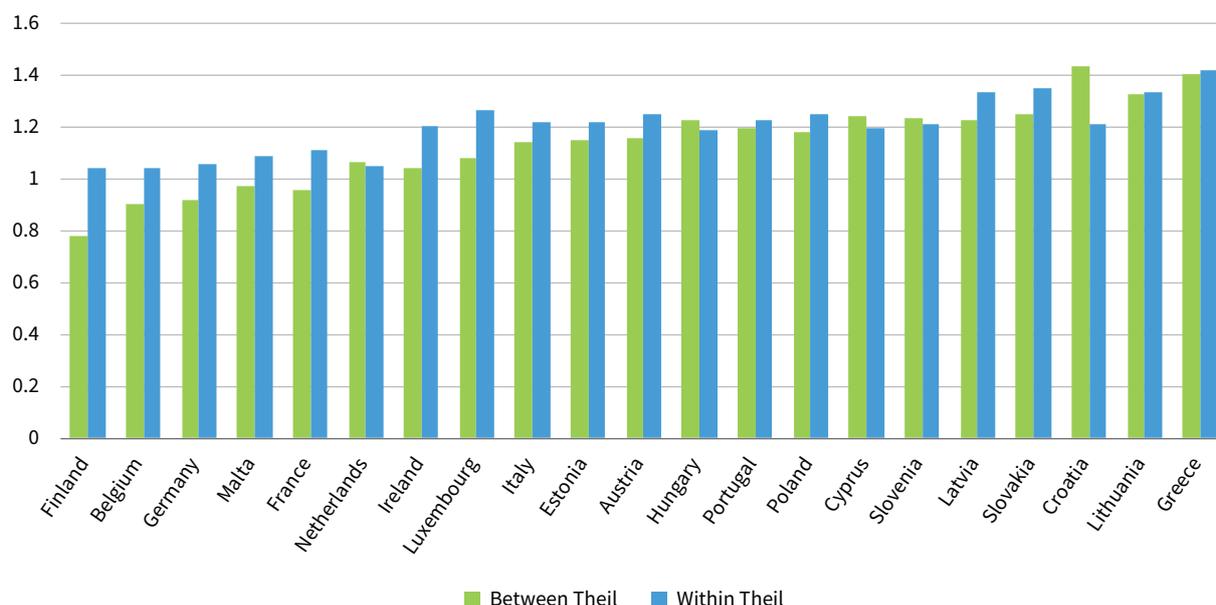
When the top quintile is broken down further, looking at the 80–85, 85–90, 90–95 and 95–100 percentiles, the same pattern is seen: in countries such as Croatia, Greece, Latvia and Lithuania, these wealth groups, on average, hold less diversified portfolios than the same wealth groups in Germany and the Netherlands.

Figure 15: Average household portfolio diversification by wealth quintiles, 21 HFCS countries, 2017 (Theil index)



Notes: The countries are ordered from the most diversified to the least diversified (a higher value signifies a less diversified portfolio). Diversification is measured by the sum of the between and within Theil indices.
Source: Calculations based on the 2017 HFCS

Figure 16: Average household portfolio diversification of the top wealth quintile, within and between diversification, 21 HFCS countries, 2017 (Theil index)



Notes: The countries are ordered from the most diversified to the least diversified (based on the sum of the between and within Theil indices).
Source: Calculations based on the 2017 HFCS

A relevant point has to do with factors that are related to portfolio diversification, considering that there is an association between education and the holding of more complex financial assets. A regression of household portfolio diversification on household wealth, education, the age and gender of the household reference person, age cohort and country effects reveals the same pattern for households in the top 50% of wealth distribution. Greece is the least diversified, followed by Latvia, Lithuania and Slovakia. The most diversified countries are Finland, Germany, Belgium, France, Malta and the Netherlands.

When, instead of country fixed effects, the Gini index of wealth is considered, there is indeed a statistically significant association between higher inequality and higher household portfolio diversification.

Future research could look into wealth variations and investigate if in certain countries households, particularly those in the top wealth quintile, shift their portfolios to maximise wealth more effectively than in other countries.

Key points

- There are two main groups of countries that have similarities in terms of asset composition: the first group consists of Austria, Germany and the Netherlands and the second group is formed of Estonia, Latvia, Lithuania and Slovakia.
- Countries in the first group have high levels of wealth inequality, while those in the second have low levels of wealth inequality (except Estonia).

- Households in countries with higher wealth inequality have more diversified portfolios, which is particularly driven by diversification in the top wealth quintile, while, in the bottom wealth quintile, the differences in diversification between countries are substantially smaller and do not follow any clear pattern in terms of the levels of wealth inequality.

Social differences in wealth

Gender differences in wealth holdings

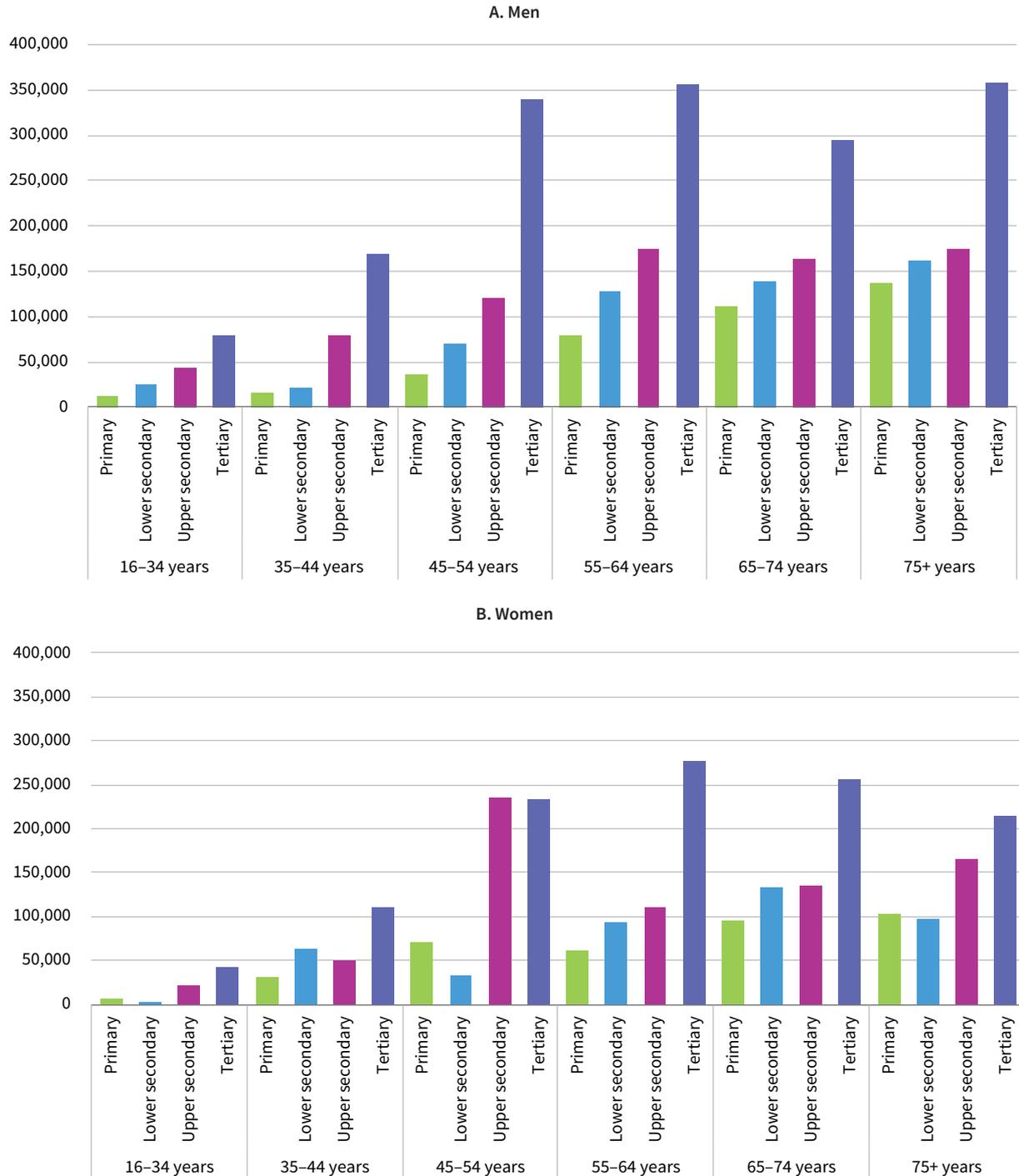
Previous research on wealth differences between genders has found that, on average, women have less wealth than men, even though the levels of wealth at the beginning of adulthood are similar between the genders. Women have a stronger focus on saving rather than buying investment products, participate in investment tools less and have less risky portfolios (European Commission, 2017b).

Given that wealth data refer to households and cannot be broken down for mixed-gender couples, gender differences can be analysed only in the case of households composed of single people (which accounted for 35% of households in the combined sample of 21 countries in the HFCS, of which 55% were female and 45% were male) or when a single parent takes care of children (which accounted for 4.5% of households). As there are too few observations in the HFCS for the latter, further analysis looks at single-person households only (such an approach to analysing HFCS 2010 data was used by the European

Commission, 2017b). As Figure 10 indicated, there are major differences in wealth holdings according to age, education and employment status (and also according to ownership of the main residence, but that is to a large extent already an outcome of wealth status). Therefore age and education were controlled for in the analysis of the gender gap in wealth holdings.

When single-person households are compared, men are on average slightly wealthier than women, with average net wealth of €93,150 and €89,426, respectively. When looking across age groups and education levels, differences become clearer (Figure 17). In most cases, men are substantially wealthier than women (a few groups are the exception: those aged 35–44 with only a

Figure 17: Average net wealth across age and education groups for single-person households by gender, 21 HFCS countries, 2017 (€)



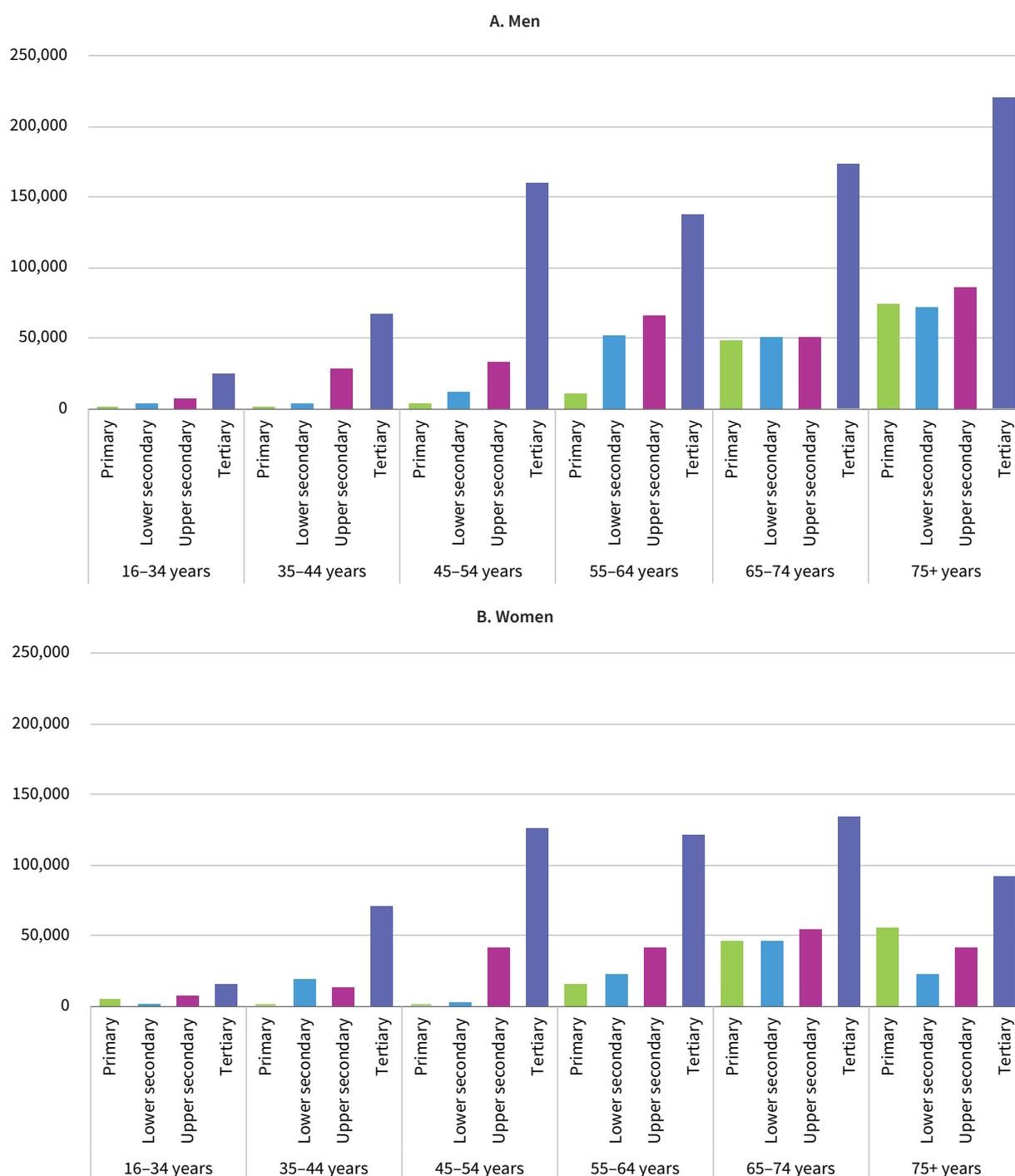
Note: Only households with one member were considered (dh0001 = 1).
Source: Calculations based on the 2017 HFCS

lower secondary or primary education and those aged 45–54 with only a primary education or, most strikingly, with an upper secondary education). For the tertiary education groups, there are marked differences, with women owning between 52% and 86% of men’s net wealth, depending on the age group considered.

The difference across genders is less acute when looking instead at median wages, but the tendency is similar

(Figure 18). Median net wealth per capita is €35,124 for men and €34,070 for women. The use of the median confirms that tertiary-educated men are much wealthier than tertiary-educated women in all age groups, with the sole exception of the 35–44 age group, for which the median is very similar for men and women. For a few groups, women have a slightly higher median, for example when comparing some age groups with upper secondary education (45–54 and 65–74 years).

Figure 18: Median net wealth across age and education groups for single-person households by gender, 21 HFCS countries, 2017 (€)



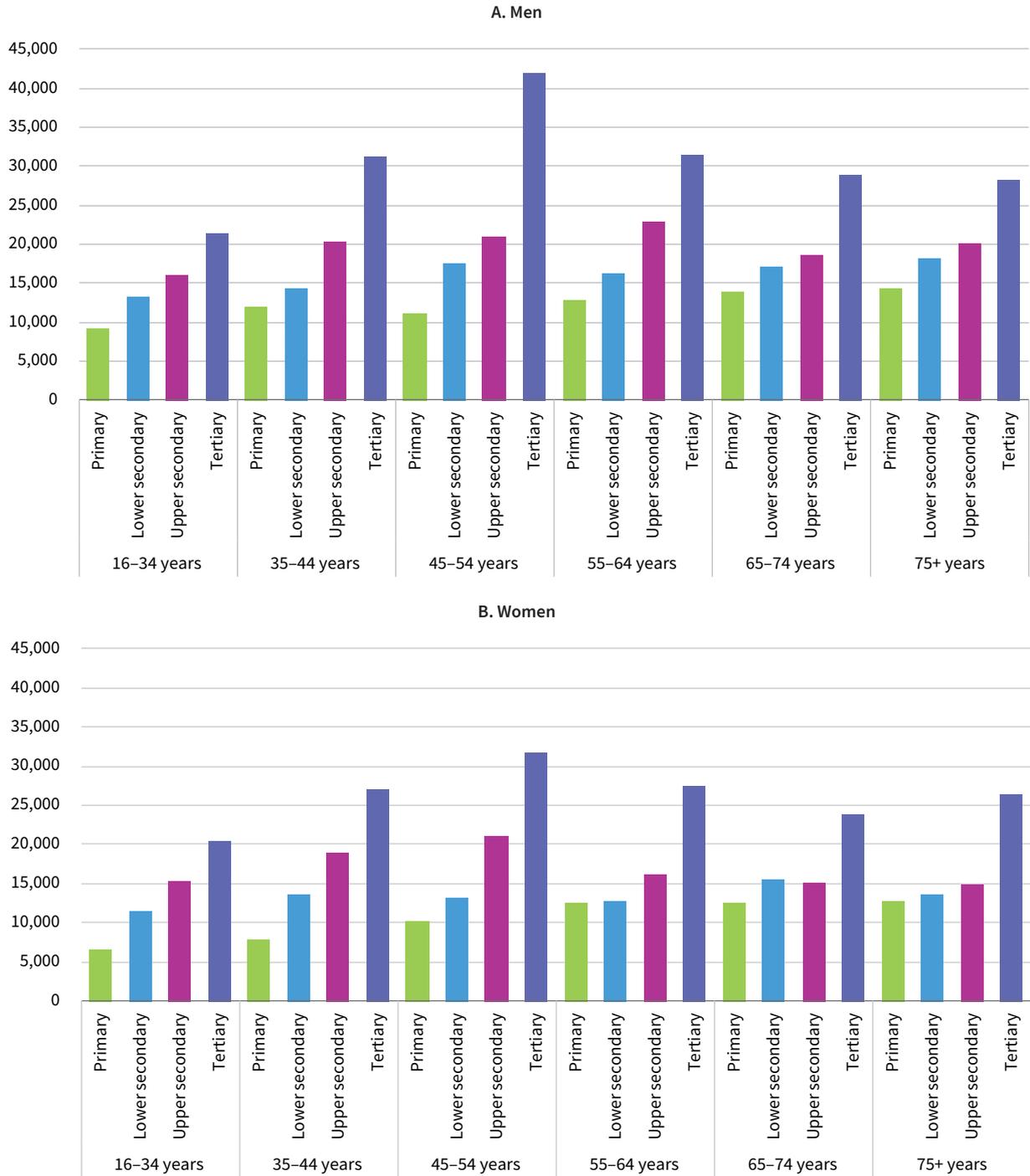
Note: Only households with one member were considered (dh0001 = 1).
 Source: Calculations based on the 2017 HFCS

There is likewise a gap between men and women in terms of income, albeit less pronounced than the gap in net wealth (Figure 19).

A relevant aspect of the large discrepancy in wealth between men and women is portfolio diversification: men in single-person households hold more diversified wealth than women in single-person households.

When looking at specific assets, men are 6.5 percentage points more likely to hold shares than women, when controlling for education, wealth levels, age cohort and country; are 1.3 percentage points more likely to hold bonds than women; and are 1.6 percentage points more likely to hold non-self-employment business wealth than women. There is no significant difference between

Figure 19: Median gross income across age and education groups for single-person households by gender, 21 HFCS countries, 2017 (€)



Notes: Only households with one member were considered (dh0001 = 1). Euro values are converted into purchasing power parity (PPP) using PPP for 'Actual individual consumption' from Eurostat, PPPs, price level indices and real expenditures for ESA 2010 aggregates [prc_ppp_ind].
Source: Calculations based on the 2017 HFCS

men and women in the HFCS 2017 data in terms of mutual funds or managed accounts incidence, nor in terms of voluntary pensions/whole life insurance.

The wealth gap between men and women is evident in every HFCS country, once age and education are controlled for. For tertiary-educated single-person households, the gender gap is the smallest in Estonia, France, Germany and Hungary and the largest in Austria, Greece and the Netherlands.

Key points

- Single-person households account for more than one-third of total households, and these households allow the gender wealth gap to be studied.
- After controlling for age and education, men are substantially wealthier than women.
- A gender gap in gross income also exists but is less pronounced than the gap in net wealth.
- Men hold more diversified portfolios than women and, in particular, when controlling for education, wealth levels, age cohort and country, men are more likely to hold shares, bonds and non-self-employment business wealth than women, while there is no significant difference between men and women in terms of mutual funds or managed accounts incidence, nor in terms of voluntary pensions/whole life insurance.
- There is always a gender wealth gap between men and women when looking at the data country by country, after controlling for age and education.

Individuals with a migration background

Individuals residing in one country but born in another (both inside and outside the EU) are overrepresented in the bottom quintiles of wealth per capita.

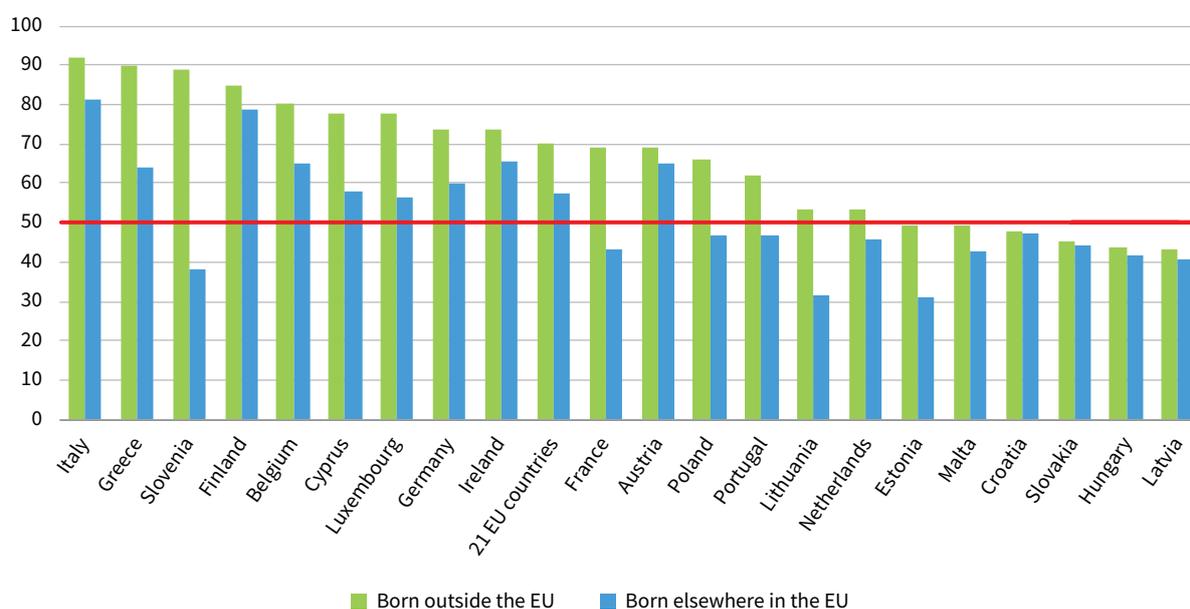
Overall, in the 2017 HFCS, 66% of individuals born in another country were in the bottom 50% of the individuals analysed in terms of wealth. Regarding those born outside the EU only, this proportion was 70% and, for those born in the EU but not in their country of residence, the proportion was 57% (Figure 20). This suggests that immigrants, on average, are poorer than local-born citizens, and immigrants from non-EU countries are even poorer than immigrants from other EU countries.

The same tendency applies to a large majority of countries. In Italy, more than 90% of people born outside the EU belong to the poor half of society. The exceptions are Latvia, Hungary, Slovakia, Croatia, Malta, and Estonia, where less than half of non-EU born people (but also EU-born immigrants) belong to the poor half of the population. Country differences may reflect different compositions of non-EU born populations, including in terms of professional skills and employment.

Key point

- The majority of people with a migration background are poorer than local-born citizens, and immigrants from non-EU countries are even poorer than immigrants from other EU countries.

Figure 20: Proportion of individuals with a migration background in the bottom 50% of wealth of their country of residence, 21 HFCS countries, 2017 (%)



Source: Calculations based on the 2017 HFCS

Table 5: Joint distribution of income and wealth, 21 HFCS countries, 2017 (%)

		Gross income quintiles				
		Q1	Q2	Q3	Q4	Q5
Net wealth quintiles	Q1	32	29	21	13	6
	Q2	29	21	21	18	11
	Q3	26	24	20	17	13
	Q4	10	18	25	25	22
	Q5	3	7	14	27	48

Note: The gross and net concepts for wealth and income differ: net wealth is assets minus liabilities, while gross income includes transfers but not the impact of taxes.

Source: Calculations based on the 2017 HFCS

Income and wealth: Differences in distribution

The analysis of the joint distribution of income and wealth is important from a social policy perspective. Social policies typically target income-poor people, yet common sense suggests that there needs to be differentiation within the group of income-poor people according to whether they have low or high wealth.

Certainly, there are some obvious channels that increase the correlation between income and wealth. Wealth typically leads to cash income through dividend, interest or rental income, not to mention capital gains. Large incomes can lead to wealth accumulation, while low incomes can lead to wealth decumulation (if any). A high correlation between income and wealth would lead to the people with the highest income belonging to the wealthiest group and the lowest earners belonging to the wealth-poorest group. On the other hand, pensioners might have low income but high wealth, while young and talented professionals might have already acquired high income but have not yet had the time to accumulate higher wealth (for more information on wealth accumulation over the life course, see OECD, forthcoming).

By matching data from the second edition of the HFCS (which includes information on wealth and gross income) with data from the European Union Statistics on Income and Living Conditions (EU-SILC) (which includes information on gross and net income but not on wealth), the OECD (forthcoming) concludes that there is only a weak association between income and wealth distribution. While the OECD finds that, at the

top of the distribution, people with high incomes have a much higher chance of also holding high wealth and, at the bottom of the distribution, people with very low incomes are likely to also hold low wealth, in the middle of the distribution, the relationship between income and wealth is much weaker. The findings from the 2017 HFCS are similar, although it is important to highlight that a large proportion of the income-poor people considered are not wealth-poor, and a large proportion of income-rich people do not hold a proportionately large share of wealth (Table 5).

Table 5 shows that only 32% of wealth-poor households are also income-poor in relative terms, that is, 32% of the bottom 20% of people in the net wealth distribution belong to the bottom 20% of people in the gross income distribution. In addition, only 6% of the poorest 20% of people in terms of net wealth belong to the richest 20% in terms of gross income. The employment status of those who are income-rich and wealth-poor differs considerably from that of other people in the top income quintile: a much larger percentage of the reference people in this group are employees, a somewhat larger percentage are self-employed and much fewer are unemployed than other people in the top income quintile (Table 6).

Slightly less than half of the richest 20% in terms of net wealth belong to the highest gross income group, suggesting that there is indeed a certain level of correlation between the two variables and that this is more significant at the top of the distribution than at the bottom. Still, more than half of the richest in terms of wealth do not belong to the richest in terms of income.

Table 6: Employment status of the reference person in households in the top income and bottom wealth quintile versus other top income quintile households, 21 HFCS countries, 2017 (%)

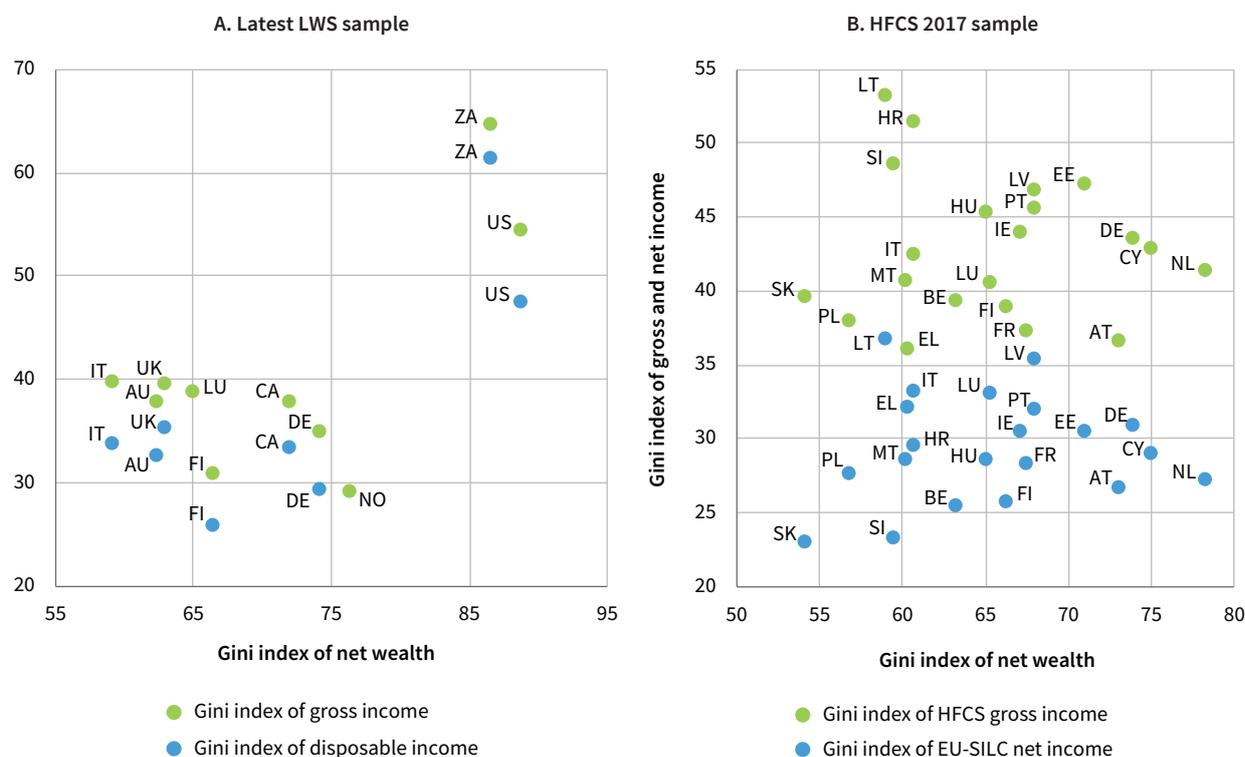
Employment status	Top income and bottom wealth quintile	Top income quintile, not bottom wealth quintile
Employed	74.1	54.3
Self-employed	5.3	2.6
Unemployed	1.3	10.9
Retired	16.8	19.7
Other: student/pupil/unpaid intern/permanently disabled/compulsory military service/fulfilling domestic tasks/other not working for pay	2.6	12.5

Note: Gross income and net wealth quintiles refer to values at the household level.

Source: Calculations based on the 2017 HFCS

Another manifestation of differences in income and wealth distribution is that countries having a relatively high inequality in one of these indicators might not have relatively high inequality in the other. The USA and South Africa are the only countries where both wealth and income inequality are high (Figure 21A). However, for other countries, considering both the HFCS and LWS samples, there is no cross-country association between wealth and income inequality. For example, considering the HFCS sample, the Netherlands has the highest inequality among the 21 European countries in terms of net wealth, but gross income inequality in this country

is below the average of the EU (Figure 21B). By contrast, Lithuania, Croatia and Slovenia have the highest gross income inequality among the 21 HFCS countries, but these countries have relatively low net wealth inequality. A comparison of net wealth inequality and net income inequality leads to qualitatively the same conclusion: there is no clear relationship between the two indicators, that is, having high inequality in one of these indicators does not necessarily coincide with high inequality in the other indicator, again with the exception of the USA and South Africa.

Figure 21: Cross-country differences in wealth and income inequality (Gini coefficient)


Note: Net wealth is the difference between assets and liabilities and refers to households per capita, whereas income refers to either gross income (before taxes but after transfers) for households per capita or net income (after transfers and taxes) for equalised households. **Source:** Part A, LWS (the LWS calls the difference between assets and liabilities 'net worth', but it is defined along the same principles as 'net wealth' in the HFCS). Part B, HFCS 2017 (Gini coefficient of household net wealth and of household gross income) and Eurostat, Gini coefficient of equalised disposable income – EU-SILC survey [ilc_di12] for the Gini coefficient of net income

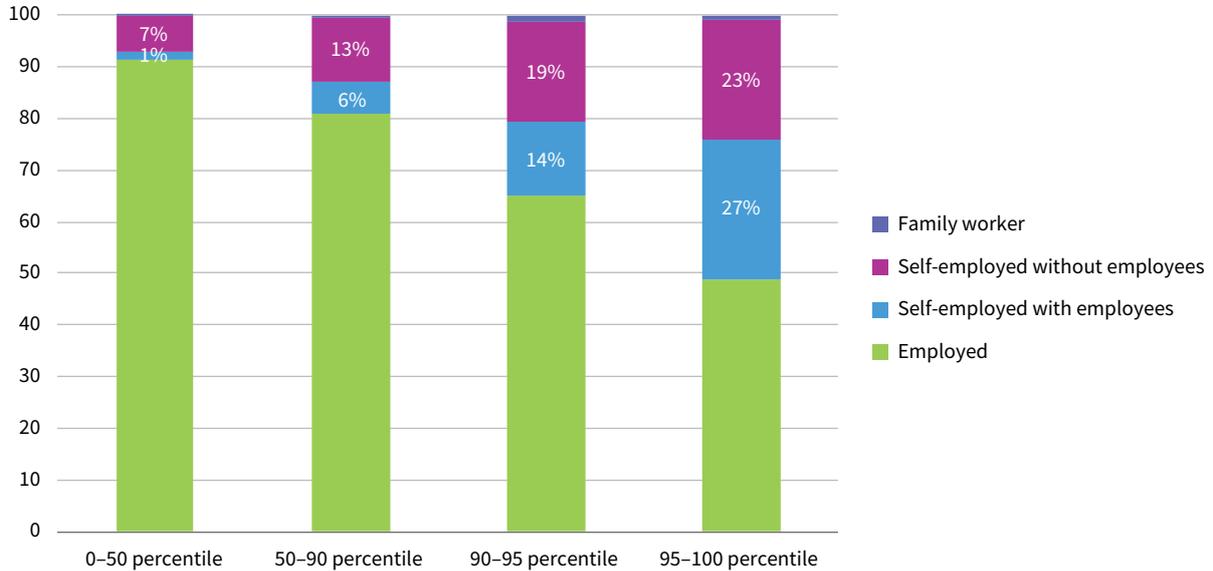
One possible caveat for this analysis is that wealth, which is a stock indicator, is being compared with income, which is a flow indicator. Well-paid younger cohorts have not had the time to accumulate wealth, while the income of older and wealthier people might have declined.

Furthermore, volatility of asset prices can cause large changes in wealth, while income can be more stable, yet a job loss can lead to significant declines in income for the unemployed. However, such temporary shocks are likely to have a smaller impact on the results, given that the observation year was 2017 for most countries (for a few countries it was 2016 or 2018); by this time, economic growth and job creation had resumed throughout Europe, while stock prices had recovered from the 2010–2013 euro zone crisis. Therefore, wealth and income are unlikely to have been affected by sudden shocks that year.

The top wealth brackets generally are also substantially more likely to have an employment status other than employed. Indeed, across almost all countries, the top 10% wealth bracket includes a substantially higher percentage of self-employed and, notably, of self-employed without employees (Figure 22). These high percentages are, to a great extent, driven by a higher proportion of professionals in the top wealth brackets, who are able to ‘incorporate’ – become companies – potentially replacing income taxation by corporate taxation, whenever such change is beneficial.

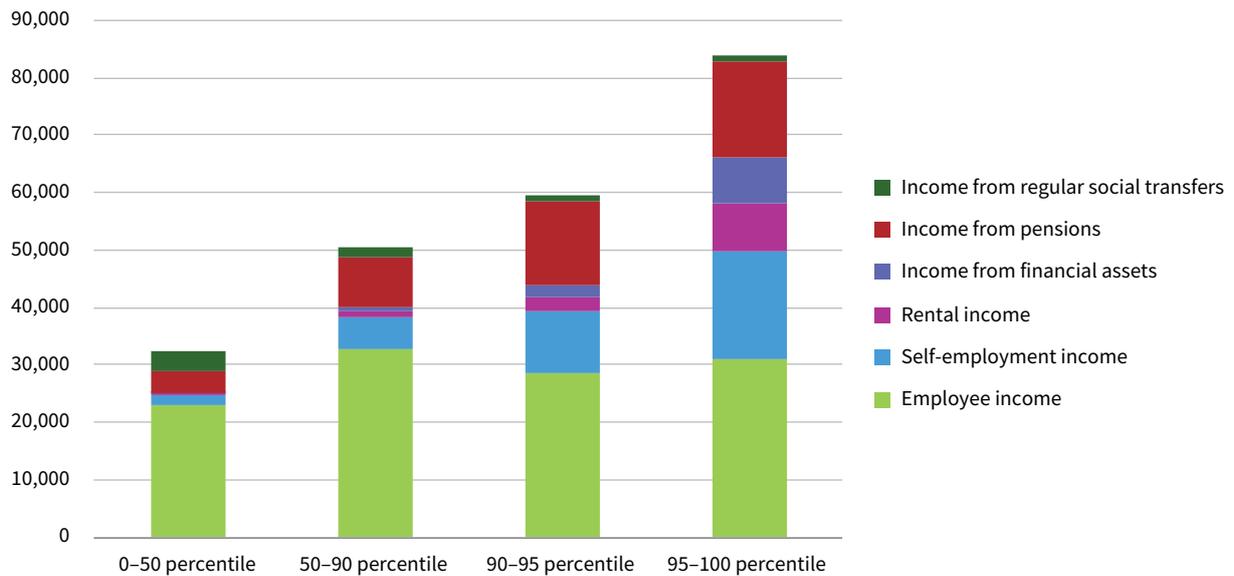
Almost one-quarter of people in the top 5% wealth bracket are self-employed without employees, suggesting that a large proportion of these individuals ‘incorporate’ themselves instead of declaring this income as wage. This phenomenon is characterised by Saez and Zucman (2020) as eroding the progressivity of the tax system because, in most countries, corporate taxes are lower and also less progressive than personal income taxes. Indeed, as seen in the HFCS 2017 data, the top wealth bracket does have, on average, higher income from self-employment, rental income and financial investments than other wealth brackets, but it does not have higher income from wages (Figure 23).

Figure 22: Employment status breakdown by wealth bracket, 21 HFCS countries, 2017 (%)



Source: Calculations based on the 2017 HFCS

Figure 23: Average income by source and wealth bracket, 21 HFCS countries, 2017 (€)



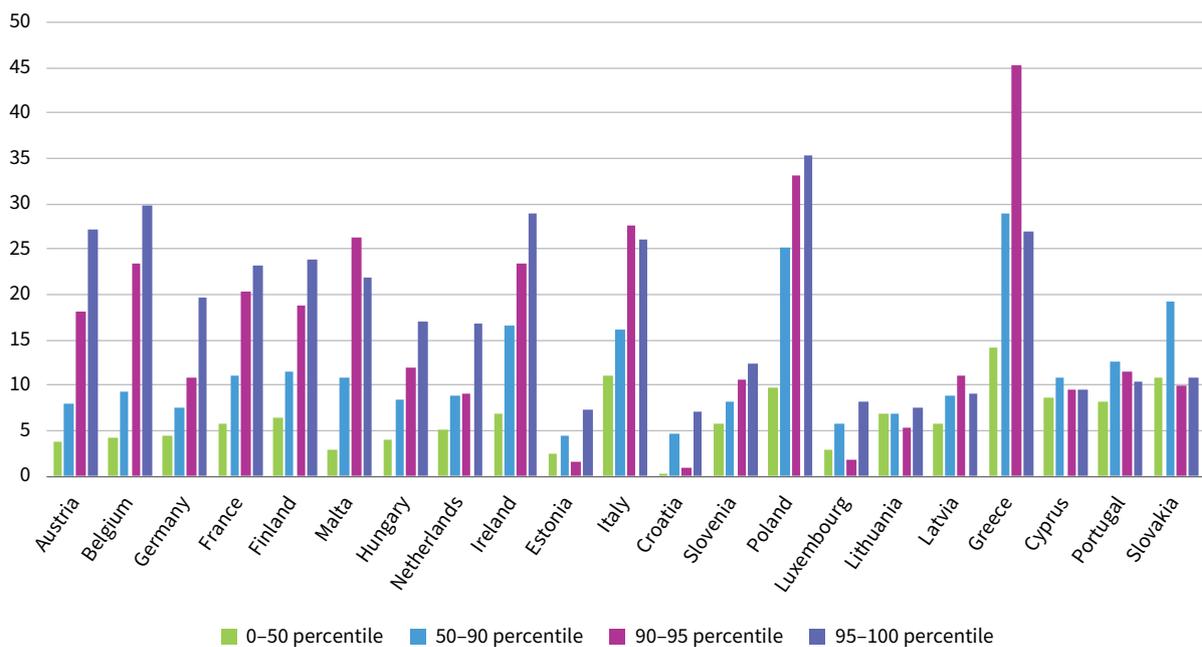
Note: Values shown refer to gross annual incomes. Euro values are converted into PPP using PPP for ‘Actual individual consumption’ from Eurostat, PPPs, price level indices and real expenditures for ESA 2010 aggregates [prc_ppp_ind].
Source: Calculations based on the 2017 HFCS

Moreover, by ‘incorporating’, these companies can deduct expenses and keep profits artificially low, further reducing the taxes paid. The self-employed in the top quintile, on average, do not report substantially higher profits than the self-employed in lower wealth brackets (not shown). Accordingly, there is not a higher

prevalence of self-employed people without employees in the high-income brackets; this is only true in regard to wealth levels.

This discrepancy (i.e. a higher prevalence of self-employed people without employees in the high-income brackets

Figure 24: Proportion of those who were self-employed without employees by wealth bracket, 21 HFCS countries, 2017 (%)



Note: Countries are ordered from highest to lowest in terms of the proportion of the self-employed without employees in the top 5% wealth bracket compared to that proportion in the 50-90 percentile (ratio of the percentage of self-employed without employees in 95-100 percentile and in 50-90 percentile).
Source: Calculations based on the 2017 HFCS

than in the lower income brackets) does not appear in certain countries that have lower wealth inequality levels, namely Slovakia, Latvia and Lithuania. However, this discrepancy also does not appear in Portugal, a country with comparatively high wealth inequality. Importantly, the attractiveness of ‘incorporating’ depends on the difference between income tax rates and corporate tax rates, as well as the possible deductions. As corporate tax rates tend to be below top labour income tax rates, the phenomenon undermines the progressivity of the overall tax system.

Key points

- While there are some obvious channels that increase the correlation between income and wealth, there are major differences in the distribution of income and wealth, because, for example, the wealthiness of low-income people can differ significantly. This has implications for social policy.
- Only one-third of those in the bottom 20% in terms of wealth belong to the bottom 20% in terms of income, while about half of the top 20% in terms of wealth belong to the top 20% in terms of income.
- The differences in individual rankings in terms of income and wealth of the middle class are even larger.

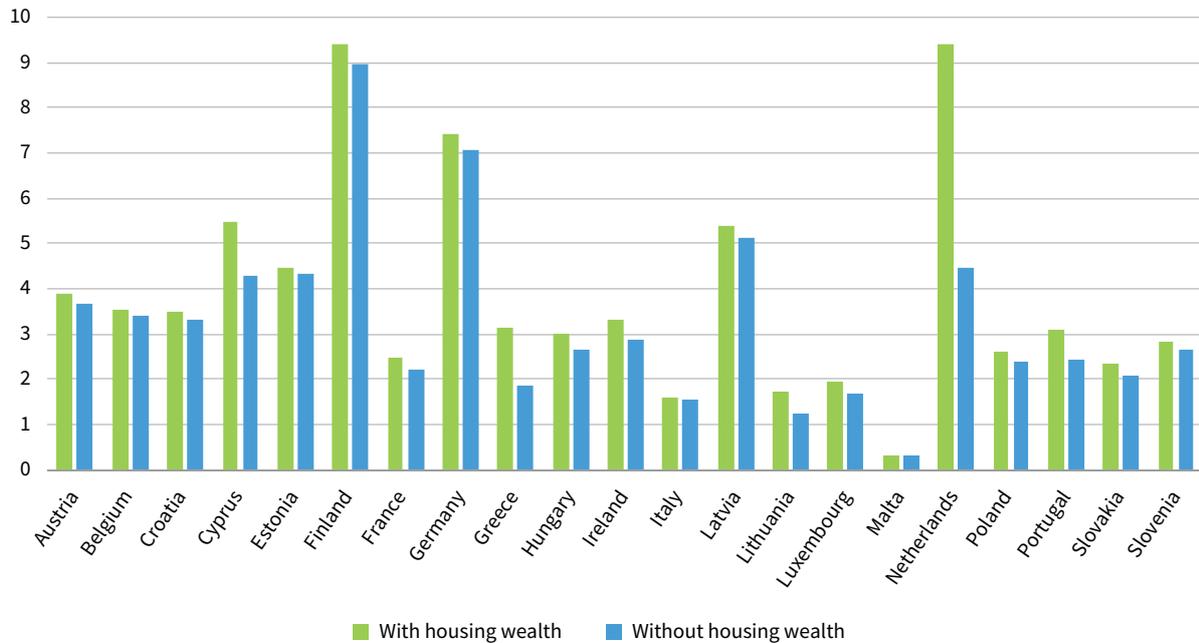
- A much larger proportion of people in the top income and bottom wealth quintile are employees and self-employed than in the top income quintile but not the bottom wealth group.
- With the exception of the USA and South Africa – two countries characterised by the highest wealth and income inequalities – there is no cross-country association between wealth and income inequality.
- A considerable proportion of the wealthiest are self-employed, many of them without employees, suggesting that such people ‘incorporate’ themselves to become companies and thereby reduce their tax burden.

Households with negative net wealth

Figure 2B (p. 18) showed that, in the population of 21 European countries, 4.2% of individuals in 2017 lived in a household with negative net wealth, that is, liabilities greater than assets.

Among negative net wealth households, the first observation is that housing-related assets and liabilities play only a minor role (Figure 25). In most countries, disregarding housing net wealth does not lift a substantial number of households out of their situation of negative wealth. The exception is the Netherlands, where more than half of the households with negative

Figure 25: Proportion of households with negative wealth with and without housing wealth, 21 HFCS countries, 2017 (%)



Note: Estimates ‘without housing wealth’ exclude real estate assets and mortgage debt.
Source: Calculations based on the 2017 HFCS

wealth would not be in that situation without liabilities related to housing. This suggests that house price declines reduced the value of properties below the value of mortgage loans. Apart from the Netherlands, in Cyprus and Greece, housing assets also play a noticeable role in negative net wealth.¹⁴ In all other countries, the role of housing in negative net wealth is minor.

In terms of housing status, 80% of households in the 21 HFCS countries are renters without other properties. Only 14.3% of negative net wealth households are homeowners with mortgages and with no other properties.

Therefore, for the bulk of households, the negative net position does not come from mortgage debt but from other debts. The probability of holding non-mortgage

debt is much higher for households with negative wealth than for those with positive wealth, as shown in Figure 26. In 17 countries, 80–99% of households with negative net wealth have non-mortgage debt, while this proportion is between 55% and 62% in the remaining three countries for which data are available. In contrast, non-mortgage debt is held by between 9% and 39% of households that have positive net wealth, underlining a widespread reliance on non-mortgage debt by households with negative net wealth.

Dividing non-mortgage debt into two components, credit lines and private loans, shows that households with negative net wealth primarily hold private loans. In addition, in most countries, households with negative net wealth also rely more on credit lines than households with positive net wealth (Figure 27).

Figure 26: Incidence of non-mortgage debt among households with and without negative wealth, 20 HFCS countries, 2017 (%)

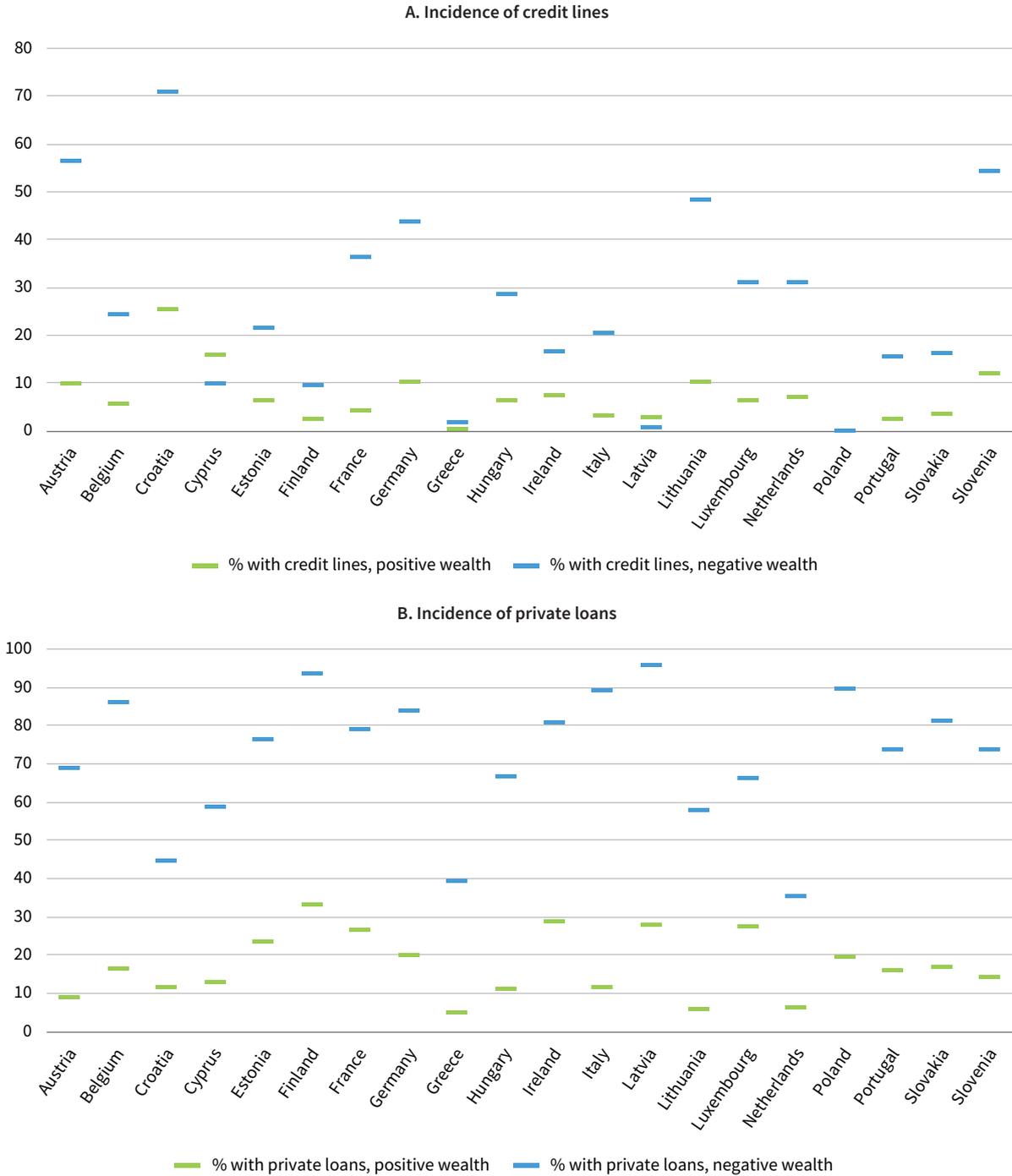


Note: Malta was not included owing to the small number of observations.

Source: Calculations based on the 2017 HFCS

¹⁴ This analysis relates to HFCS 2017 data. Figure 2 indicated a large decline in the incidence of negative wealth households in Ireland from 2014 to 2017, which is probably related to housing: house prices halved between 2007 and 2013, but then increased by one-third up to 2017.

Figure 27: Incidence of credit lines and private loans among households with and without negative wealth, 20 HFCS countries, 2017 (%)



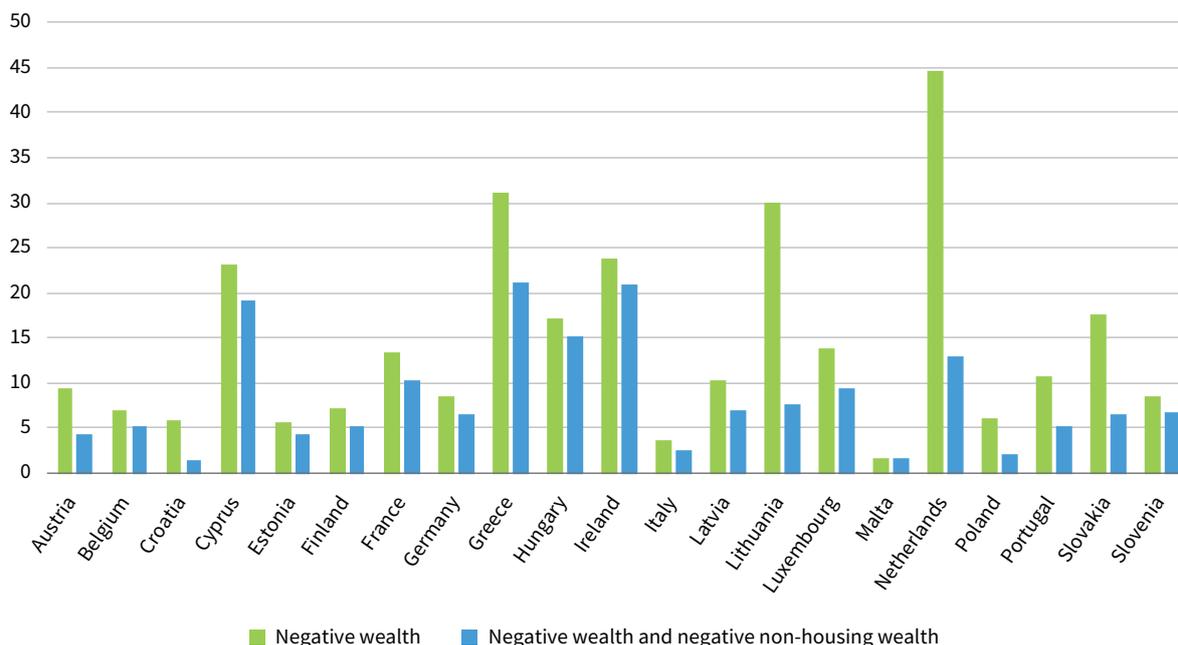
Note: Malta was not included owing to the small number of observations.

Source: Calculations based on the 2017 HFCS

Negative net wealth households are asset-poor (Figure 28). They are not, as one might at first think, talented and credit-worthy entrepreneurs who suffered a substantial business loss. In most countries, their assets are very small compared to the average wealth in

their country: less than 15% in most countries considered. Even in the Netherlands, the average asset holdings of negative net wealth households amounts to less than half of the average Dutch wealth holdings.

Figure 28: Negative net wealth household assets per capita as a percentage of the mean of the country, 21 HFCS countries, 2017 (%)

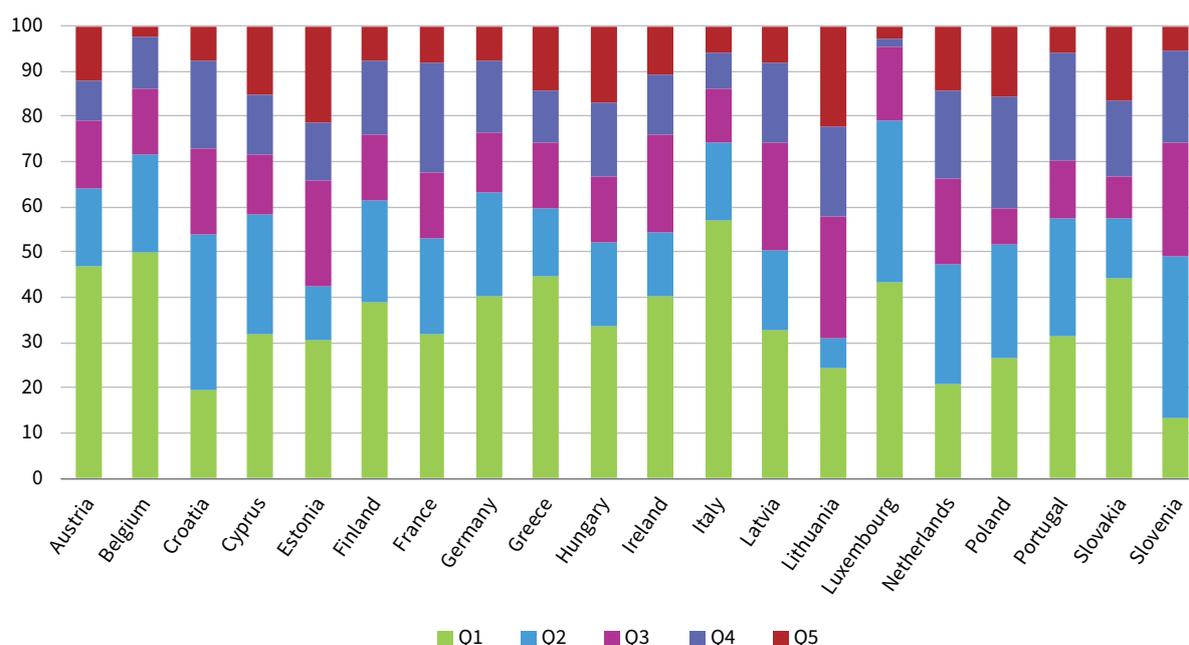


Source: Calculations based on the 2017 HFCS

Negative net wealth households have lower incomes than those with positive net wealth, although there are exceptions. Figure 29 shows that negative net wealth households are overrepresented in the bottom gross

income quintiles, with, on average, approximately 60% of negative net wealth households belonging to the bottom 40% in terms of income. However, some of these households are in the top 20% of income.

Figure 29: Distribution of negative wealth households across income quintiles, 20 HFCS countries, 2017 (%)



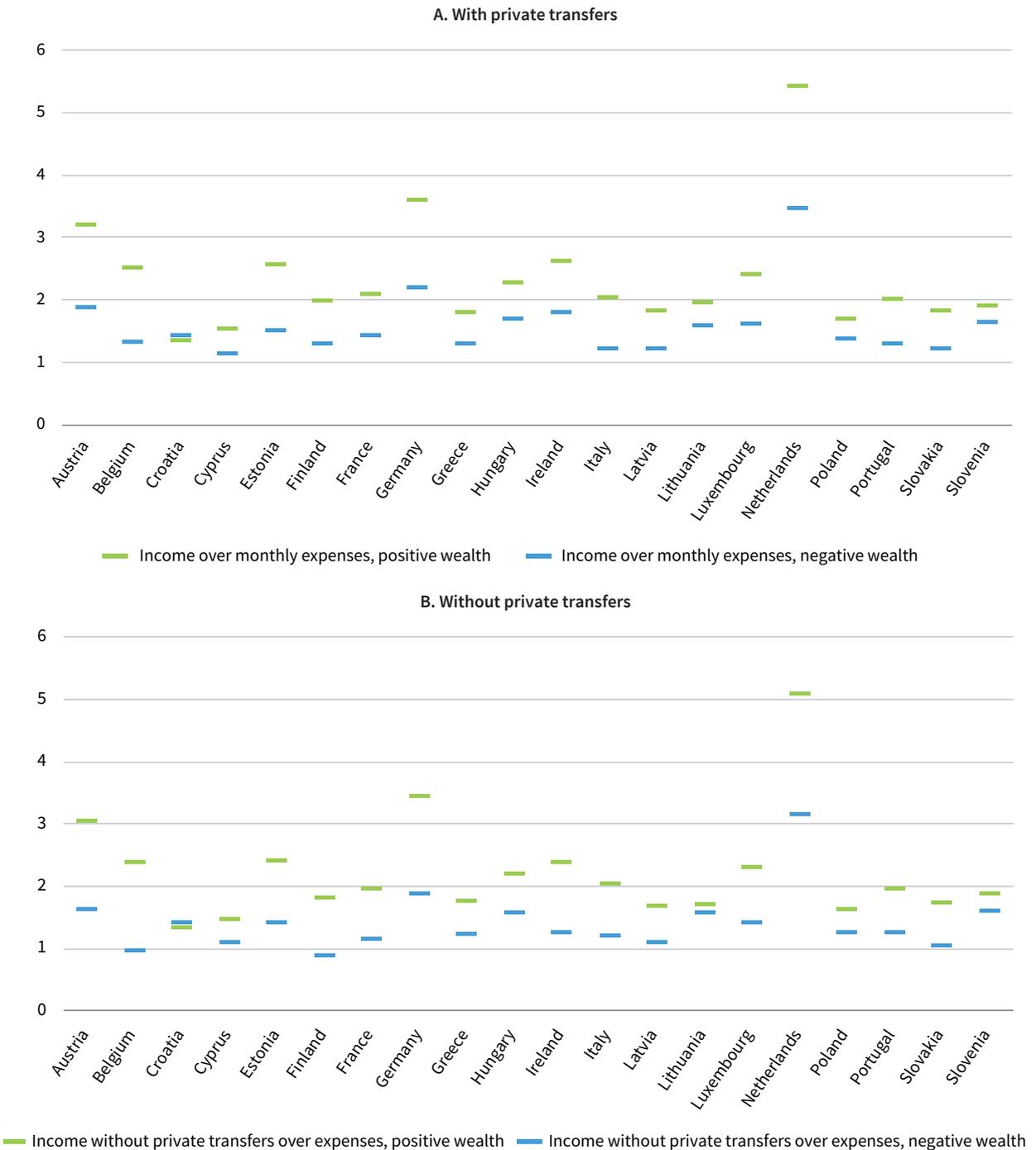
Notes: The HFCS includes only gross income, which is used here. The analysis is conducted at the household level. Malta was not included owing to the small number of observations.

Source: Calculations based on the 2017 HFCS

Negative net wealth households, on average, have higher monthly incomes than what they spend on consumer goods and services, rent, mortgage and servicing their debt – they are thus able to cover their expenses. However, they are much closer to the expenses threshold than positive wealth households, so are more vulnerable to a potential income shock and to

unexpected expenses. Moreover, negative net wealth households receive private transfers as an important part of their income. In Belgium and Finland, without these private transfers, on average, households would not be able to meet their regular monthly expenses (Figure 30).

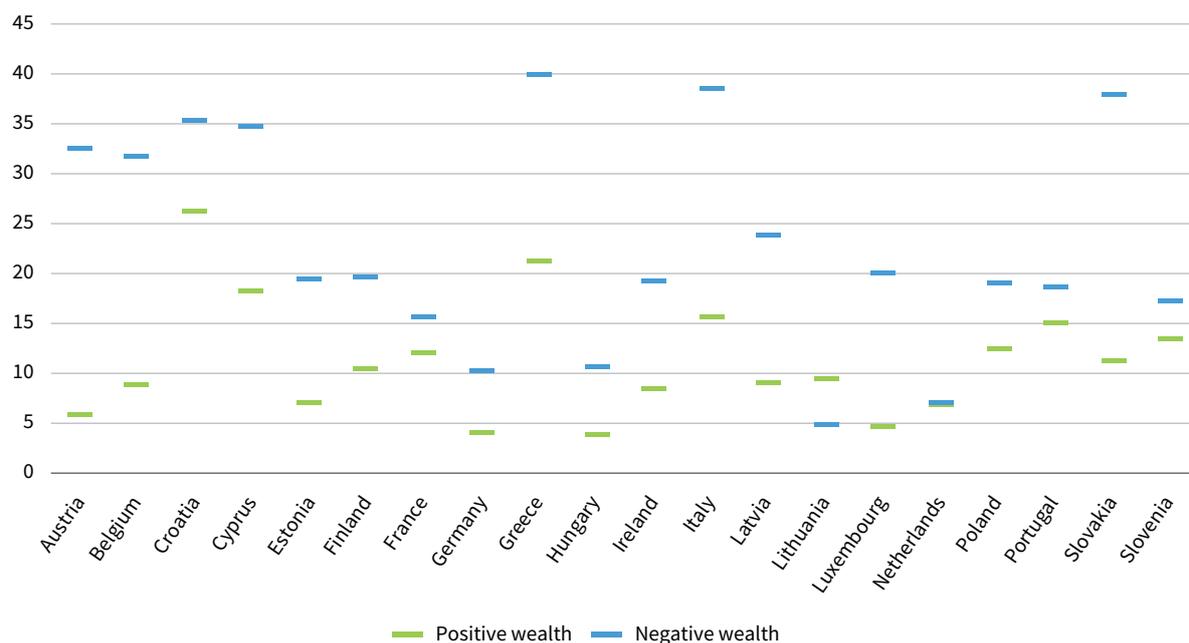
Figure 30: Ratio of household income to regular monthly expenses with and without private transfers, 20 HFCS countries, 2017



Notes: Regular monthly expenses are consumer goods and services, rent and debt servicing. Malta was not included owing to the small number of observations.

Source: Calculations based on the 2017 HFCS

Figure 31: Proportion of households with someone unemployed: negative versus positive wealth households, 20 HFCS countries, 2017 (%)



Note: Malta was not included owing to the small number of observations.

Source: Calculations based on the 2017 HFCS

Negative net wealth households are more likely to include an unemployed person than positive wealth households in 19 countries; the exceptions are the Netherlands and Lithuania (Figure 31). In some countries, the gap in unemployment is enormous: in Austria, Belgium, Croatia, Cyprus, Greece, Italy and Slovakia, between 30% and 40% of negative net wealth households include a person who is unemployed, compared to just 15% or less of positive net wealth households. Being unemployed can result in the household having a low income, thus complicating the prospects for exiting negative wealth.

Individuals with negative wealth are also younger than the average population, with households whose person of reference is between 16 and 34 years being overrepresented among negative net wealth households in all countries except Greece.

Key points

- In most countries, negative net wealth is not related to property ownership (the key exception is the Netherlands), as, on average across the 21 HFCS countries, 80% of negative net wealth households are made up of renters without other properties.
- Negative net wealth households have private loans and reliance on credit lines is widespread.
- Negative net wealth households are asset-poor.
- The income of most negative net wealth households is lower than the income of positive net wealth households, and their income is closer to their monthly expenses threshold.
- Negative net wealth households are younger and more likely to have an unemployed person in the household than positive net wealth households.

3 Focus on housing: Prospect of owning your own home

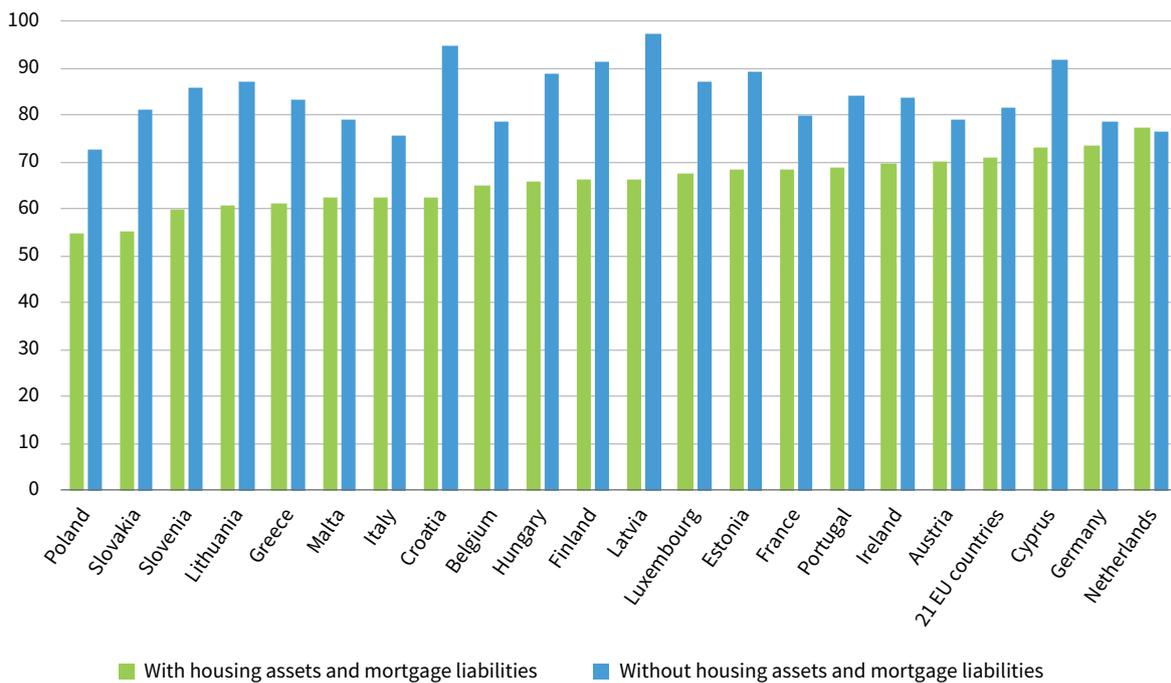
Impact of homeownership on wealth inequality

In a cross-country comparative perspective, homeownership appears to have an inequality-reducing effect (Causa et al, 2019). A hypothetical wealth concentration when housing assets and mortgage liabilities are excluded (Figure 32) leads to all countries in the HFCS becoming more unequal in terms of wealth, with the sole exception of the Netherlands, where mortgage debt is a substantial burden on households (as explored in the previous chapter). Moreover,

countries have more similar wealth inequality to each other when housing wealth is excluded.

To better measure how more widespread homeownership leads to lower wealth inequality, households were divided into eight groups according to the ownership of the household's main residence and other characteristics (Table 7). Homeowners with multiple properties (groups 1 and 3) have, on average, almost 20 times the wealth of renters without any other properties (group 7; renters also include tenants in social housing, because the HFCS does not discriminate according to the type of rental).

Figure 32: Net wealth inequality with and without real estate assets and mortgages, 21 HFCS countries, 2017 (Gini coefficient)



Note: The Gini coefficient without housing assets and mortgage liabilities is calculated by setting both real estate values and mortgage debt to zero.
Source: Calculations based on the 2017 HFCS

Table 7: Household groups defined by property ownership, 21 HFCS countries, 2017

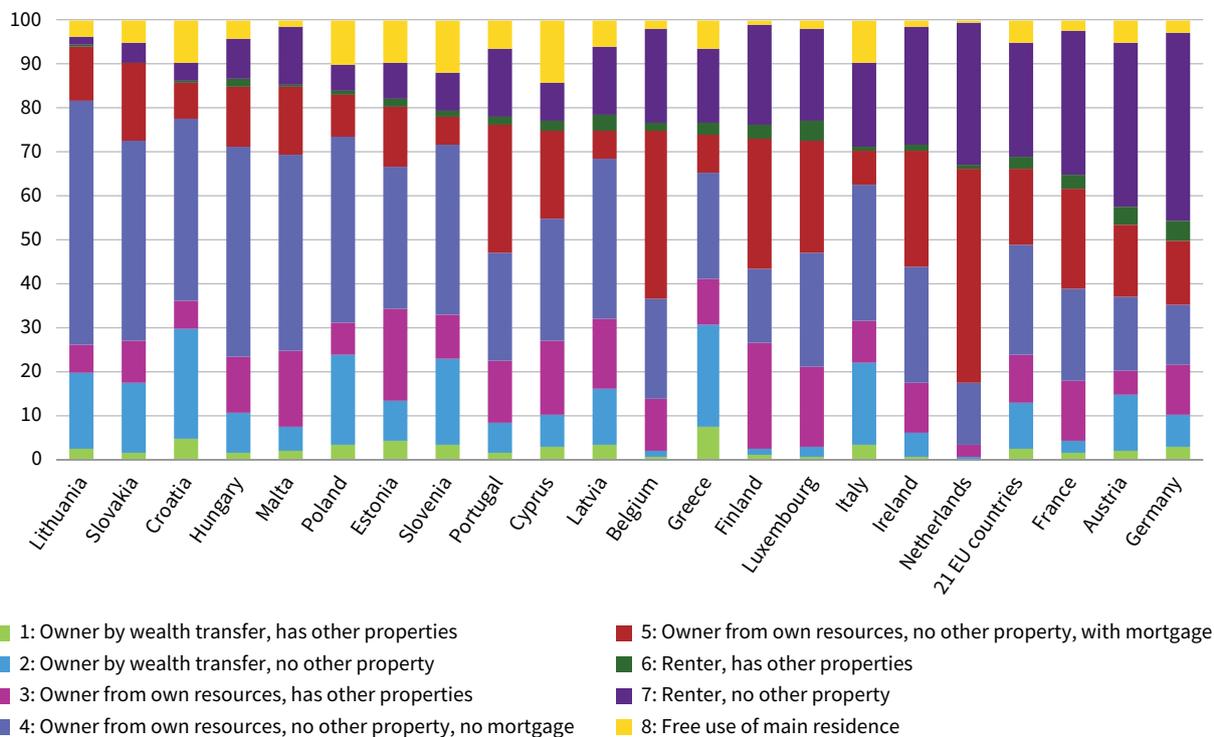
Group	Household’s main residence status	Proportion in population (%)	Average net wealth (€)
1	Owner by wealth transfer, has other properties	2.4	272,518
2	Owner by wealth transfer, no other property	10.4	92,863
3	Owner from own resources, has other properties	10.9	259,528
4	Owner from own resources, no other property, no mortgage	25.0	104,971
5	Owner from own resources, no other property, with mortgage	17.5	70,603
6	Renter, has other properties	2.5	112,737
7	Renter, no other property	26.2	14,400
8	Free use of main residence	5.1	32,875

Source: Calculations based on the 2017 HFCS

There are substantial differences across European countries in terms of the proportion of these eight categories in the population (Figure 33). Owners from own resources and without other property or mortgage debt account for 40–50% of individuals in most central European countries, where there are very few renters. In contrast, renters make up almost half of the population

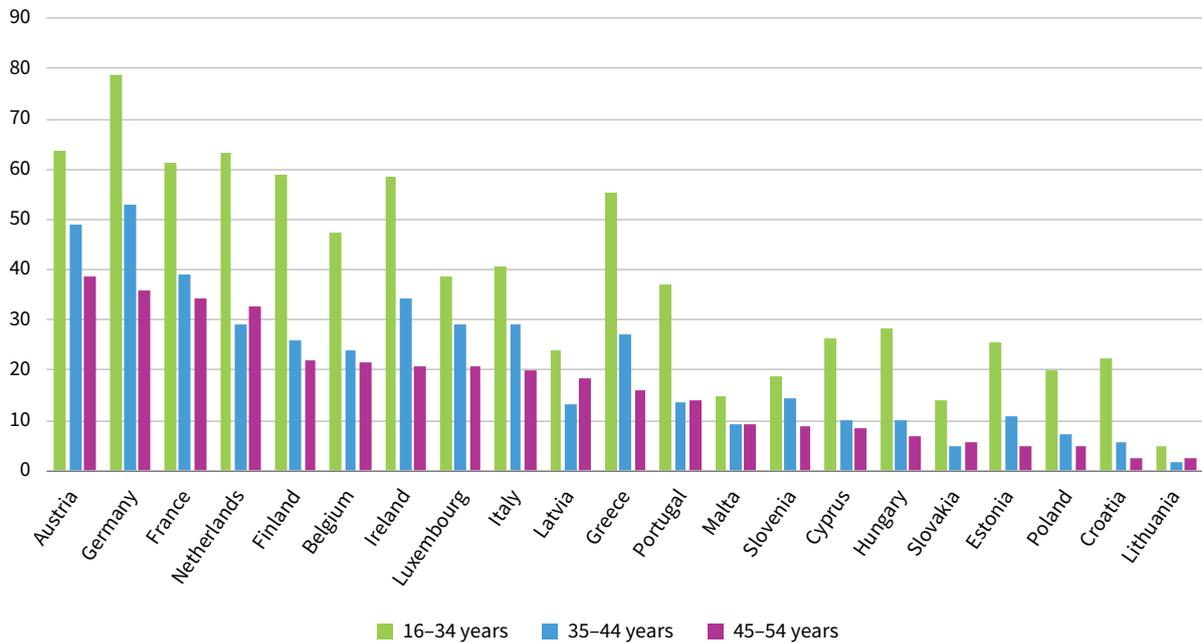
in Germany and above 30% of the population in Austria, France and the Netherlands. Mortgage-financed homeowners make up the largest group in the Netherlands and Belgium. Owners from wealth transfer are most prevalent in Greece and some central European countries.

Figure 33: Proportion of individuals in housing status groups, 21 HFCS countries, 2017 (%)



Note: Countries ordered by the combined share of owners (groups 1-5).
 Source: Calculations based on the 2017 HFCS

Figure 34: Proportion of households that rent their main residence and have no other properties, by age of the reference person, 21 HFCS countries, 2017 (%)



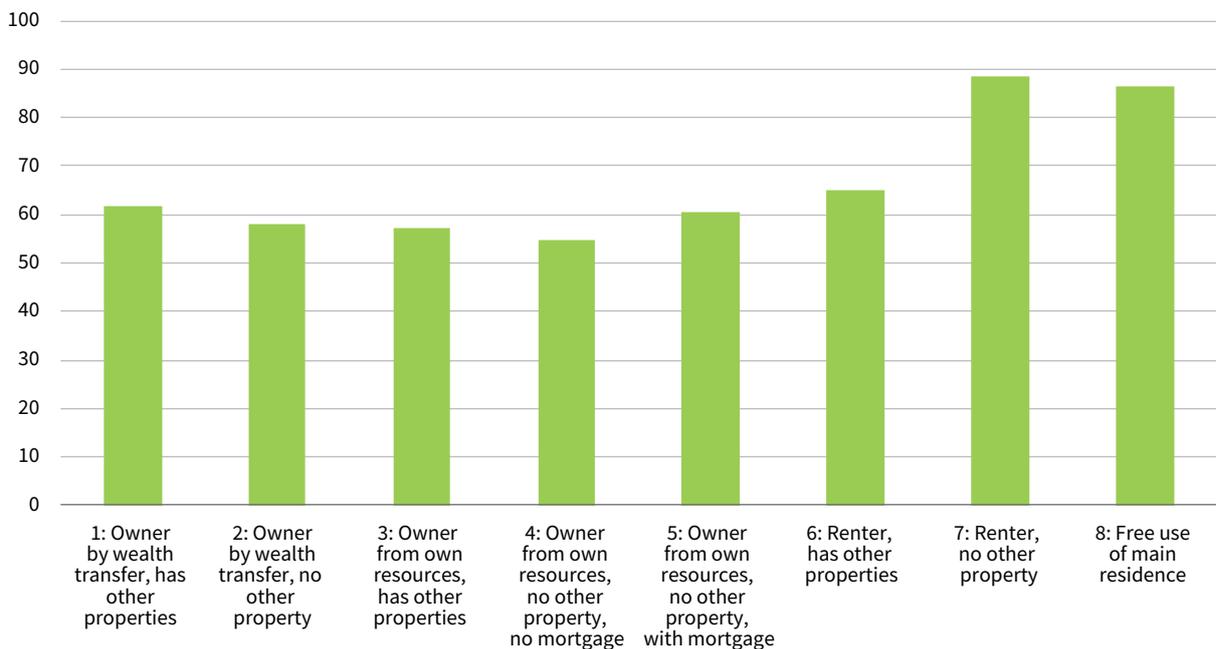
Source: Calculations based on the 2017 HFCS

It is also worth considering the incidence of renters without other properties by age of the reference person in the household to show differences between generations (Figure 34). Although countries such as Cyprus, Croatia, Estonia, Finland, Hungary and Poland – and also Germany and the Netherlands – have a large proportion of renters among households headed by 16–34-year-olds, renters make up a considerably

smaller proportion of households headed by 35–44 and 45–54-year-olds. These differences might indicate that, in such countries, there is a higher probability of transitioning from tenancy to homeownership with age.

Wealth inequality varies within each group in terms of tenancy status. Renters without other properties are very unequal, while owners are substantially more similar among themselves (Figure 35). Renters with no

Figure 35: Net wealth inequality within housing status groups, 21 HFCS countries, 2017 (Gini coefficient)



Source: Calculations based on the 2017 HFCS

other properties also make up the great majority of individuals with negative wealth.

Key points

- More widespread homeownership is associated with lower wealth inequality. However, the role of home ownership in mitigating wealth inequalities should be further studied to understand why wealth inequalities happen to be lower in countries with higher homeownership rates.
- When housing assets and mortgage liabilities are disregarded, all HFCS countries are more unequal in terms of wealth, with the exception of the Netherlands.
- Homeowners with multiple properties have, on average, almost 20 times the wealth of renters without any other properties.
- European countries differ substantially in terms of the proportion of different types of homeowners and renters: owners from own resources and without other property or mortgage debt account for 40–50% of individuals in most central European countries and there are very few renters in these countries; renters make up almost half of the population in Germany and over 30% of the population in Austria, France and the Netherlands; the Netherlands and Belgium have the highest proportion of mortgage-financed homeowners; and owners from wealth transfer are most prevalent in Greece and some central European countries.

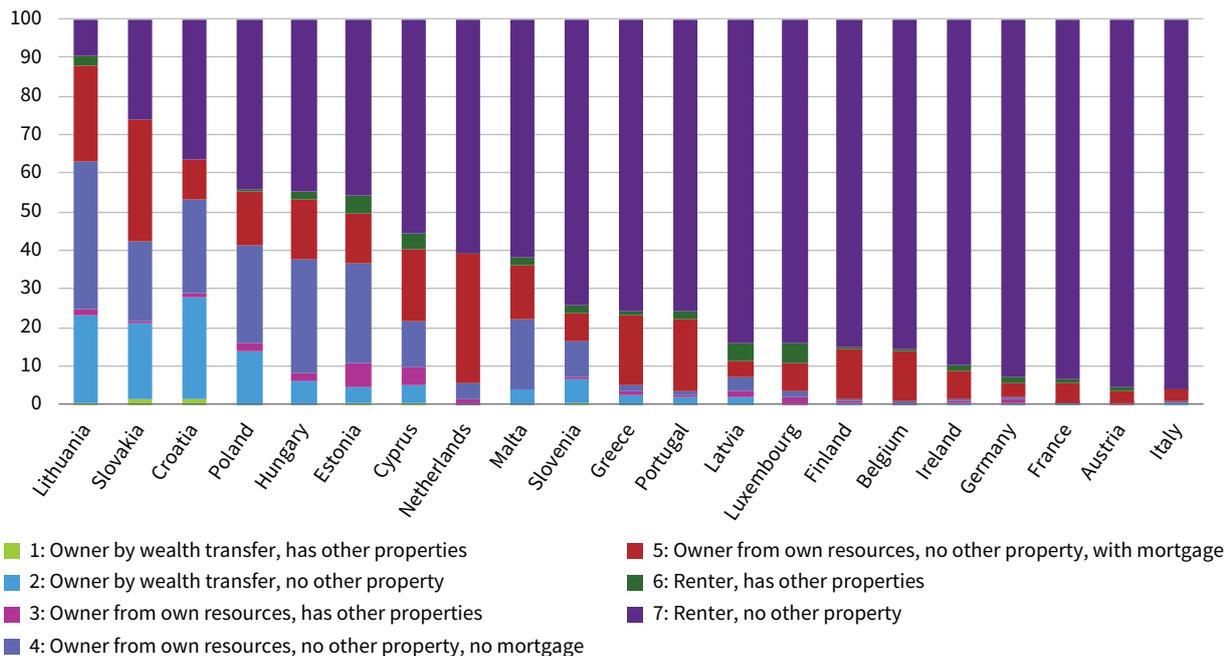
- The proportion of renters in the population declines with age in several countries, suggesting a transition to homeownership with age.
- Renters without other properties are a very unequal group in terms of wealth, while the different types of owners are substantially more similar.

Rent payers and rent receivers

In the 2017 HFCS, average net wealth was found to be €364,000 for individuals who live in households receiving rental incomes compared to €82,000 for those without rental incomes. While only 9% of households have rental income, rent receivers own 31% of net wealth. Almost two-thirds of the people with rental income are in the top quintile of net wealth and another quarter are in the second richest wealth quintile. Households that own at least two properties but do not accrue rental income do not have the same level of advantages; their average wealth (per capita) is €220,000. However, the largest proportion of this group belongs to the richest segment of society: 44.5% of them are in the top wealth quintile and 30.8% are in the second richest quintile.

Figure 36 shows the composition of the poorest 20% of society according to housing status. For most countries, most individuals in the bottom wealth quintile are renters without any other properties. For 12 of the 21 countries considered, this proportion is at least 75%.

Figure 36: Proportions of individuals in the bottom wealth quintile according to housing status, 21 HFCS countries, 2017 (%)



Note: Individuals with free use of their main residence are excluded. Countries ordered by the combined share of owners (groups 1–5).
Source: Calculations based on the 2017 HFCS

Some countries exhibit a substantially different pattern. In Lithuania, only 9.5% of individuals in the bottom quintile are renters, 40.6% have built or purchased their own home and have no mortgage outstanding, while 26% have a mortgage. In Slovakia, only 26% of individuals in the bottom quintile are renters.

In several countries, such as the Netherlands, Finland, Belgium, Ireland, Germany, France and Austria, individuals who are owners by wealth transfers are not represented in the bottom wealth quintile. This might indicate the protective effect of wealth transfers, but it is also a result of wealth persistence: individuals with wealthier families are more likely to be wealthy, owing to direct transfers and also to upbringing conditions and higher education (see Chapter 4).

Renters are a very heterogeneous group, with high levels of wealth inequality. Countries with higher wealth inequality appear to have individuals in higher wealth quintiles resorting to tenancy. Further investigation into the transition from tenancy to homeownership helps to explain how homeownership can improve the wealth profile of households and potentially reduce wealth inequality.

Key points

- A huge wealth gap exists between rent payers and rent receivers.
- For most countries, most individuals in the bottom wealth quintile are renters without any other properties.
- In several countries, individuals who are owners by wealth transfers are not represented in the bottom wealth quintile (owing to the protective effect of wealth transfers and wealth persistence).
- Renters are a very heterogeneous group, with high levels of wealth inequality.

Rise in savings and property value

A mortgage leads to a progressive increase in wealth if the return on the house is higher than the interest rate on the mortgage loans. If renting a house is cheaper than monthly payments on a mortgage, households that rent have higher net liquid assets. However, renters will have lower wealth than mortgage holders if rents are higher than interest payments, even if no increase in housing value occurs. Moreover, interest payments eventually subside, while rents can last for a whole life.

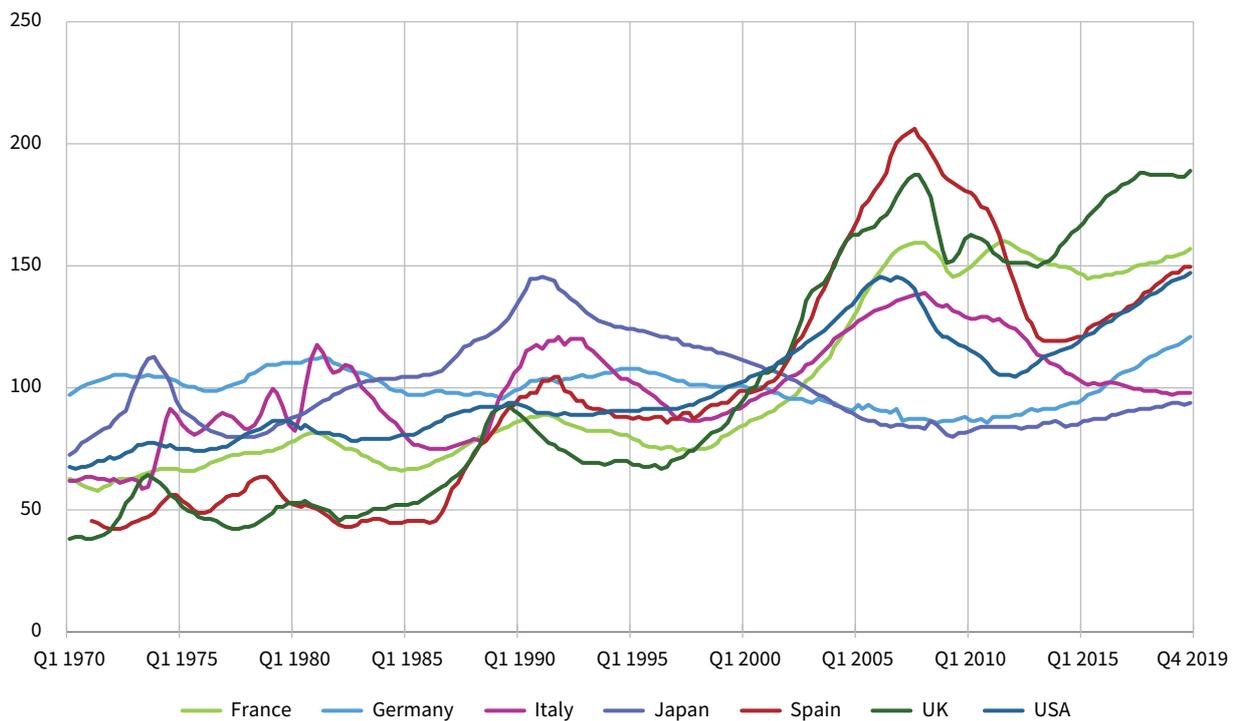
The HFCS has some – albeit limited – panel components (that is, information about the same household in different editions). For these households, the research investigated the impact of the transition of someone renting their main residence in either the first or the second edition (2010 and 2014) to becoming a homeowner through a mortgage in the following edition. Restricting the focus to the households whose household composition had not changed between the two editions, that did not own other residences and that did not receive a substantial inheritance or gift between the two editions resulted in the selection of only a few households, all of which were in Germany: 17 households that transitioned between the first and second editions and 16 that transitioned between the second and third (no information was available for Italy on this).

Although only around three years went by in the periods considered, these households witnessed considerable increases in the value of their property. Between the first and second editions, all of the residences under review either kept their value or their value increased – households on average witnessed a 36% increase in house value. Between the second and third editions (2014 and 2017), the households gained, on average, 23.5% in terms of house value, with only two residences devaluating.

Whenever housing prices increase above inflation, individuals make a positive return on their investment. This has been the case over the long term in all the countries included in Figure 37, although there was large volatility and, in some cases (for example, Japan from the early 1990s to the mid-2000s and Italy from 2007 to date), there were protracted periods of real house price declines. Demographic shifts, such as a shrinking population, might reduce property values, while migration from rural to urban areas might disadvantage rural property and benefit urban property values.

Outside housing values, any savings made by paying interest instead of rent contribute to increases in wealth. By assuming that the amount borrowed is paid in equal instalments over the duration of the loan (without ahead-of-schedule repayments), the amount of interest (in euro) that would be paid over the entirety of the loan duration was calculated for the 33 German households and compared with rental payments that would be made over the same period if individuals had kept their rental agreements.

Figure 37: Real house price index (historical average = 100), Q1 1970–Q4 2019



Source: OECD dataset, 'Analytical house prices indicators'

For individuals who transitioned between 2010 and 2014, interest payments were, on average, only 38% of rental payments, while, for those who transitioned between 2014 and 2017, interest payments were, on average, 48% of rental payments. All but one household paid less in interest over the duration of the mortgage than they would pay in rent as tenants. There are also non-financial gains from the transition, such as large gains in home size.¹⁵ Other aspects of housing (for example, quality and location) might also change with the transition, but there is no information about such aspects in the HFCS.

Nonetheless, in such a comparison, the alternative uses of wealth must be considered. Most households that made this transition did not borrow the full value of the house, having instead liquidated some of their assets for the purchase. If these assets had been financially invested, they would have yielded a return, which is now foregone. Looking into which assets were liquidated for the purchases and looking at the use of

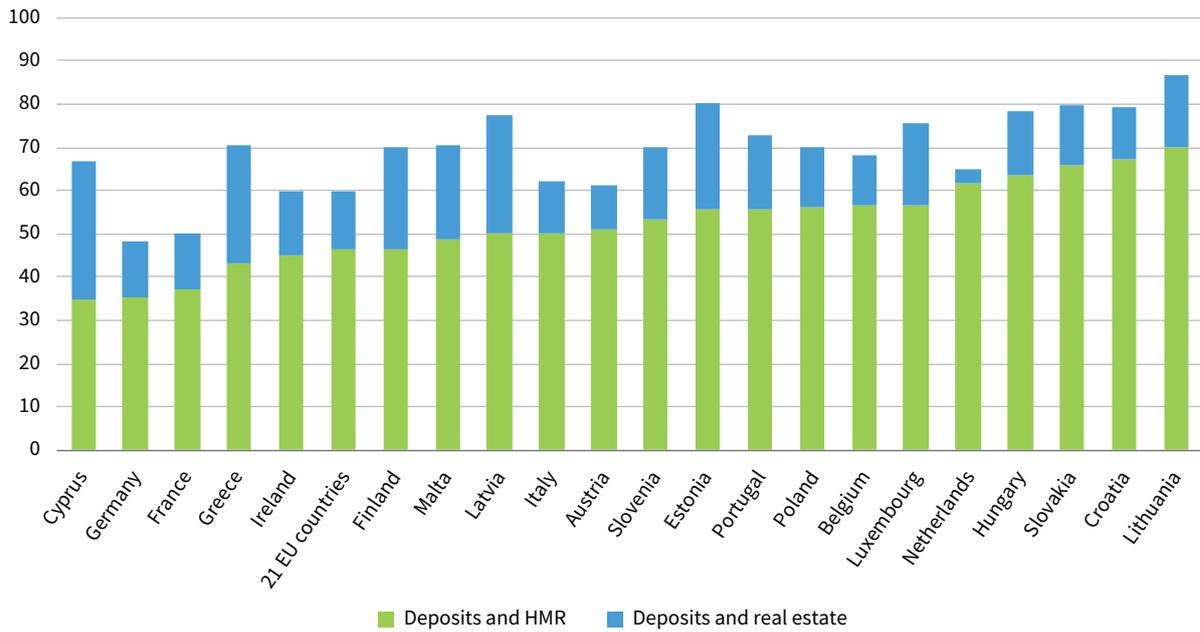
wealth by households that did not make this transition can give insights into whether or not foregone savings are important. Another factor to consider is that expenses for maintenance and property taxes fall on the owner and not the tenant. On the other hand, after the loan is repaid, no further interest is due, while, for a renter, the rental fee remains.

While questions around homeownership and wealth accumulation should be considered in contrast to other possible uses of wealth, in practice a large proportion of society keeps most savings in deposits and real estate (Figure 38). Almost 60% of the resident population in the 21 HFCS countries have 80% or more of their assets in deposits and real estate.

Although keeping tenancy agreements could allow households to invest in assets other than housing, tenants without other properties actually have the smallest incidence of financial assets other than deposits (Figure 39).

¹⁵ All but 2 of the 16 (between the second and third editions) and 17 (between the first and second editions) households had a residence with more square metres upon purchase than they were renting, with an average increase of 37% for those who transitioned between the first and second editions and of 56% for those who transitioned between the second and third editions.

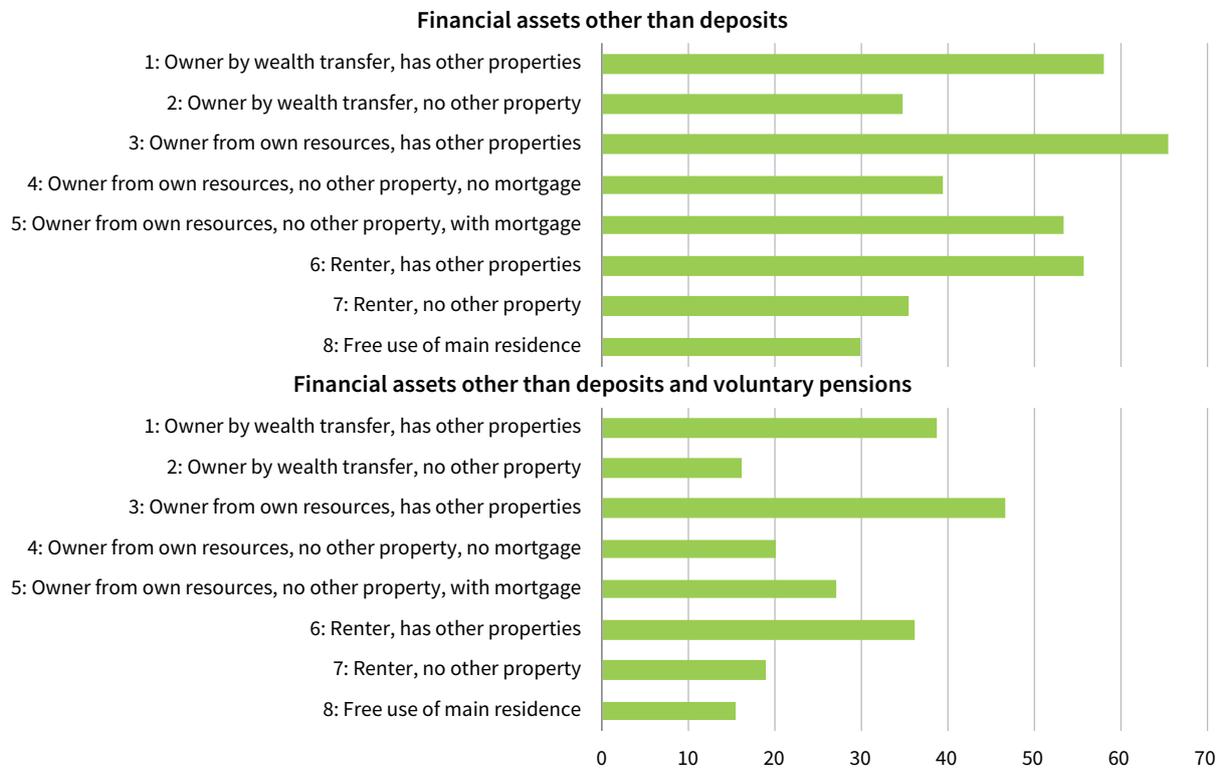
Figure 38: Proportion of individuals with more than 80% of their assets in deposits and real estate, 21 HFCS countries, 2017 (%)



Note: HMR = household's main residence. 'Deposits and HMR' include deposits and the household's main residence, while 'deposits and real estate' includes deposits and all kinds of real estate holdings (including the household's main residence).

Source: Calculations based on the 2017 HFCS

Figure 39: Incidence of financial assets other than deposits and voluntary pensions by housing status, 21 HFCS countries, 2017 (%)



Note: Financial assets beyond deposits and voluntary pensions are considered, which are mutual funds, bonds, traded shares, money owed to households and other financial assets (see Table 4).

Source: Calculations based on the 2017 HFCS

Tenants typically constitute more fragile households, as measured by the number of months they can continue to pay for all expenses from their savings (Midoes Correia, 2020). In a deep economic crisis, privately earned income (everything outside of pensions and public transfers, including salary, self-employed income, rental income, income from financial assets and regular private transfers) could decrease substantially, making it necessary to draw on financial savings to cover basic expenses. Midoes Correia (2020) quantified the cases of a complete loss of privately earned income and a 50% drop in privately earned income. When considering only utilities and food at home as basic consumption, there are 5.5 million individuals from the combined 342 million residents in 21 countries included in the 2017 HFCS who could not afford two months of basic expenses from their financial savings and 50% of their privately earned income. When additionally considering rent on the main residence, the number of vulnerable people increases by 4.3 million to 9.8 million. Mortgage payment on the main residence increases the number by 1.5 million to 11.3 million. Thus, while the total number of homeowners with a mortgage is larger than the total number of tenants, many more tenants are vulnerable to the loss of half of their privately earned income than are mortgage-holders.

The SHARE dataset makes it possible to estimate the effect of housing value, rent payments and interest on wealth, as the subsample obtained from the HFCS would be too small to do this.

Wind and Dewilde (2019) resorted to the first edition of the HFCS and, through propensity score matching, analysed the effect of homeownership on wealth. Controlling for various individual characteristics, they found that homeownership increased wealth, although the gap in net wealth between tenants and homeowners depended on the country. The gap was largest in countries that promote homeownership through family and state support, was smaller where homeownership is achieved through bank financing, and was the smallest in countries with widespread rental markets.

Key points

- The few households in the HFCS that transitioned from being renters of the main residence to owners through a mortgage (without receiving an inheritance or gifts) observed considerable increases in house value, gained a larger home and benefited from significantly lower interest payments than previous rent payments.
- Although keeping renter status could allow households to invest in assets other than housing, tenants without other properties actually have the smallest incidence of financial assets other than deposits.
- Renters are typically more fragile households, as measured by the number of months they can continue to pay for all expenses from their savings.
- Earlier research using the HFCS found that homeownership does increase wealth.

Effect of homeownership on long-term wealth

This study strand estimated the effect of homeownership on wealth by considering the average impact on wealth of one additional year of homeownership through the SHARE dataset. Results are specific to the population aged 50 years and over.

Focusing on individuals who became homeowners, the research first considered how the age at which individuals became homeowners affected the maximum wealth they reported. A linear regression, with a large number of control variables, shows that, on average, having become a homeowner one year earlier is associated with a gain in household wealth per capita of €1,920 (PPP; Table 8). An analysis by country shows substantial heterogeneity, with the association between homeownership and wealth levels being stronger in France, Denmark, Luxembourg, Germany and the Netherlands. In Estonia, Croatia, Slovenia and Czechia, there is barely any association between the age of becoming a homeowner and the maximum wealth reported.

Table 8: Effect of having become a homeowner one year earlier on maximum wealth, SHARE editions 1–7 (2004–2017)

Sample	Gain (PPP €)	P-value	Sample size
Full sample	1,920	0.000	24,958
Austria	1,316	0.199	1,629
Belgium	681	0.315	2,845
Croatia	113	0.888	737
Czechia	323	0.248	1,588
Denmark	2,660	0.000	2,864
Estonia	21	0.934	2,613
France	3,283	0.003	1,504
Germany	2,443	0.008	2,051
Italy	1,050	0.048	1,627
Luxembourg	2,655	0.078	728
Netherlands	2,200	0.094	908
Slovenia	223	0.536	1,464
Spain	835	0.653	707
Sweden	2,110	0.001	1,707

Notes: The column 'Gain (PPP €)' shows the increase in household wealth per capita when becoming a homeowner one year earlier, measured at purchasing power parity (PPP) in euros. Only countries with more than 500 observations were considered. Effects that are statistically significant with a significance level of at least 10% are in bold.

Source: Calculations based on the SHARE dataset

These two groups of countries have very different housing markets: the first group has a higher proportion of renters and the second group has comparatively high homeownership rates. The association at the country level does not appear to line up purely with real estate

market movements: countries with a higher association between becoming a homeowner earlier and increases in wealth did not have a higher average housing value in the window 1970–2019 (OECD, 'Analytical house prices indicators' dataset) (Table 9).

Table 9: Effect of having become a homeowner one year earlier on maximum wealth, controlling for housing value, SHARE editions 1–7 (2004–2017)

Sample	Gain (PPP €)	P-value	Sample size
Full sample	1,610	0.000	12,974
Belgium	1,281	0.201	2,265
Denmark	2,861	0.000	2,223
France	493	0.761	1,296
Germany	2,245	0.000	1,759
Italy	452	0.367	1,385
Netherlands	3,531	0.104	685
Spain	-437	0.842	562
Sweden	2,652	0.001	1,304

Notes: The column 'Gain (PPP €)' shows the increase in household wealth per capita by becoming a homeowner one year earlier, measured at purchasing power parity (PPP) in euros. Only countries with more than 500 observations were considered. Effects that are statistically significant with a significance level of at least 10% are in bold.

Source: Calculations based on the SHARE dataset

For Germany, these results support those from the HFCS analysis: there are gains from homeownership beyond those explained by house values.

There are some limitations to the models used above. One issue is a possible omitted variable bias. Individuals more likely to become homeowners earlier might have other characteristics that subsequently make them wealthier, such as initial wealth levels. Killewald and Bryan (2016), who weighted observations by the inverse of the probability of becoming a homeowner at a certain time, still found a large effect of homeownership on wealth but less so than models that do not explicitly address this.

Another issue is that the year in which individuals first become homeowners does not necessarily correspond to a consecutive period as a homeowner. To address this, only individuals who were tenants to start with were considered. The research examined respondents' wealth before they were homeowners and total income accrued during the period analysed, and dealt with a subsample of individuals who owned no other properties, did not receive a substantial inheritance in the period considered and started by being tenants.

First, only households that had participated in all editions of SHARE were taken into account. In addition, the analysis considered only those households that, in the first edition, were tenants and, until the seventh edition, were only either tenants or homeowners (the respondent did not live in a residence without paying for it) and never owned other properties beyond their main residence in the period considered.

A simple regression was run on household wealth (and household wealth per capita) at the seventh edition on the number of years spent as a homeowner between the first and seventh editions, on wealth at the first edition and on whether or not individuals received a substantial inheritance in the period. Wealth at the first edition and the receipt of a substantial inheritance were considered, as they influence the probability of becoming a homeowner and increase wealth. If wealth was initially high or became so because of inheritance, this should have helped the transition from renter to owner.

On average, one extra year of homeownership corresponds to an extra €14,000 PPP of household wealth at the end of the period and to an extra €8,000 PPP of household wealth per capita. Controlling for total income accrued in the period (as it is related to both homeownership and wealth accumulation) but not through homeownership (as the individuals considered

were not renting out their properties), one year of homeownership was still associated with an extra €13,000 and €7,000 (PPP), respectively, of household wealth. Including a control for growth rate of wealth between the first and second editions, one year of homeownership remained associated with higher wealth, as well as when considering the education of the respondent.

The exercise above yielded only 16 households out of the total 295 included in the sample that, having started as tenants, experienced a period of homeownership. To consider a larger number of observations on such a transition, the research examined all individuals who participated in the first to fifth editions (including those who participated in the first to sixth and first to seventh editions) and the same model was run. This sample included 43 households moving from the position of renter to owner, out of the total 661 observations. Again, a statistically significant association was found between years of homeownership and wealth at the fifth edition (2013), with one extra year of homeownership being associated with an extra €15,000 of wealth per capita at the fifth edition. When considering only households in which respondents did not experience any change in marital status, years of homeownership remains statistically significant (model (4) of Table 10), while the indicator of the change in marital status is statistically not significant (models (5) and (6) of Table 10).

Compared with respondents who remained tenants, those who invested in housing experienced an increase in wealth, which is not explained by differences in original levels of wealth or by differences in the pre-existing growth rate of wealth.

Key points

- The seven editions of SHARE allow a comprehensive analysis to be undertaken of the transition from tenant to homeowner.
- The research found that having become a homeowner one year earlier was associated with a gain in household wealth per capita of €1,600–8,000 PPP (depending on the model specification), and that this was only partially related to increases in house prices.
- The increased wealth of new homeowners relative to those who remained tenants is not explained by differences in original levels of wealth or by differences in the pre-existing growth rate of wealth.

Table 10: Effect of an extra year of homeownership on wealth at the time of the fifth edition of SHARE, 2013 (all available countries) (PPP €)

Explanatory variables	Dependent variables					
	(1) Wealth per capita	(2) Household wealth	(3) Wealth per capita	(4) Wealth per capita	(5) Household wealth	(6) Wealth per capita
Years as homeowner	15,970*** (3,422)	25,203*** (3,881)	15,881*** (3,432)	15,340*** (3,832)	24,985*** (3,884)	15,804*** (3,448)
Initial wealth per capita	0.152** (0.0704)		0.147** (0.0675)	0.278*** (0.0845)		
Substantial inheritance	9,182* (5,059)	13,482** (5,934)	8,932* (5,087)	6,662 (5,622)	12,835** (5,874)	9,995** (4,969)
Initial household wealth		0.103 (0.0626)			0.0940* (0.0566)	0.0684* (0.0359)
Total income			0.0406 (0.0302)	0.0102 (0.0290)	0.108** (0.0426)	0.0395 (0.0307)
Marital status change					-2,619 (6,824)	-1,688 (6,043)
Number of observations	661	661	661	577	661	661
R-squared	0.161	0.255	0.163	0.159	0.266	0.158

Notes: The dependent variable is either wealth per capita or household wealth in 2013, the time of the fifth edition of SHARE. Years as homeowner = the number of years the respondent was a homeowner between waves 1 and 5 of SHARE. Initial wealth per capita = wealth per capita in 2004, the time of the first edition of SHARE. Substantial inheritance = a dummy variable with a value of 1 if the respondent received an inheritance above €5,000, and zero otherwise. Initial household wealth = household wealth in 2004, the time of the first edition of SHARE. Total income = sum of the total income accrued between waves 1 and 5 of SHARE. Marital status change = dummy variable taking value 1 if the respondent's marital status changed between waves 1 and 5, and zero otherwise. ***, **, and * denote parameter estimates that are different from zero at the 1%, 5% and 10% level, respectively. Standard errors are included in brackets below the parameter estimates. No data available in the case of empty cells.

Source: Calculations based on the SHARE dataset

Homeownership and social mobility

Persistence of homeownership

Based on the SHARE dataset, through a linear probability model, the research examined how the probability of respondents ever owning one of the properties they live in correlates with their parents having owned a property.

On average, having had parents who owned a property is associated with a 6.5 percentage point higher probability of the respondent having also owned a property (Table 11), controlling for parental background and for maximum income reported, among other variables, including country fixed effects. The association is statistically significant in all of the countries considered except Croatia, Luxembourg, Slovenia, Spain and Sweden. The association does not differ substantially across countries. In countries where owning a house confers substantial wealth gains, the noted persistence will harm social mobility.

While the association between parental and respondent homeownership does not differ considerably across countries, parental background generally is associated

Table 11: Average effect of parents being homeowners on the probability of being a homeowner among those born in 1965, SHARE editions 1–7 (2004–2017)

Sample	Percentage point change in probability of becoming a homeowner	P-value	Sample size
Full sample	6.5	0.000	35,039
Austria	8.3	0.001	2,776
Belgium	3.7	0.044	3,360
Croatia	-1.8	0.731	1,038
Czechia	11.7	0.000	3,579
Denmark	5.2	0.000	3,175
Estonia	4.8	0.008	3,673
France	4.5	0.040	1,774
Germany	8.4	0.000	3,498
Italy	4.6	0.052	2,244
Luxembourg	-0.9	0.776	875
Netherlands	11.5	0.000	1,187
Slovenia	3.4	0.515	1,972
Spain	1.0	0.841	813
Sweden	3.0	0.123	1,981

Note: Only countries with more than 500 observations were considered. Effects that are statistically significant with a significance level of at least 10% are in bold.

Source: Calculations based on the SHARE dataset

with becoming a homeowner earlier (not shown), which, in the long term, leads to higher wealth through housing valuation and savings.

The association between income and the probability of being a homeowner (Table 12) is stronger in countries where renting is more widespread.

Table 12: Average effect of 1% higher income on the probability of being a homeowner among those born in 1965, SHARE editions 1–7 (2004–2017)

Sample	Effect	P-value	Sample size
Full sample	4.8	0.000	35,039
Austria	6.7	0.001	2,776
Belgium	1.3	0.108	3,360
Croatia	3.8	0.004	1,038
Czechia	-2.8	0.220	3,579
Denmark	4.8	0.000	3,175
Estonia	2.0	0.103	3,673
France	7.0	0.000	1,774
Germany	8.8	0.000	3,498
Italy	2.2	0.029	2,244
Luxembourg	2.5	0.171	875
Netherlands	4.9	0.004	1,187
Slovenia	1.6	0.313	1,972
Spain	3.8	0.204	813
Sweden	9.0	0.000	1,981

Note: Effects that are statistically significant with a significance level of at least 10% are in bold.

Source: Calculations based on the SHARE dataset

Educational outcomes

There is a concern about lack of liquidity in housing wealth and how it might be an inferior ‘cushion’. When considering children of SHARE respondents and their educational outcomes, no evidence of this is found; higher housing wealth is associated with higher probabilities of better educational achievements, and more so than non-housing wealth. This might be a result of regional effects – higher housing wealth can also be found in urban centres, where there might be better access to education – or a result of non-financial advantages of homeownership.

When considering the total wealth of parents, including a variable on whether parents are homeowners, having parents who are homeowners is statistically associated with better educational outcomes, which supports a non-financial explanation for the differential.

The reasons might pertain to stability and housing quality during upbringing, as both tend to be higher in owned homes. Haurin et al (2002) find that, when controlling for wealth levels, homeownership promotes positive child outcomes, such as better maths and reading achievements and fewer behavioural problems. In SHARE, it is possible that this channel is present in the association found between homeownership and educational attainment.

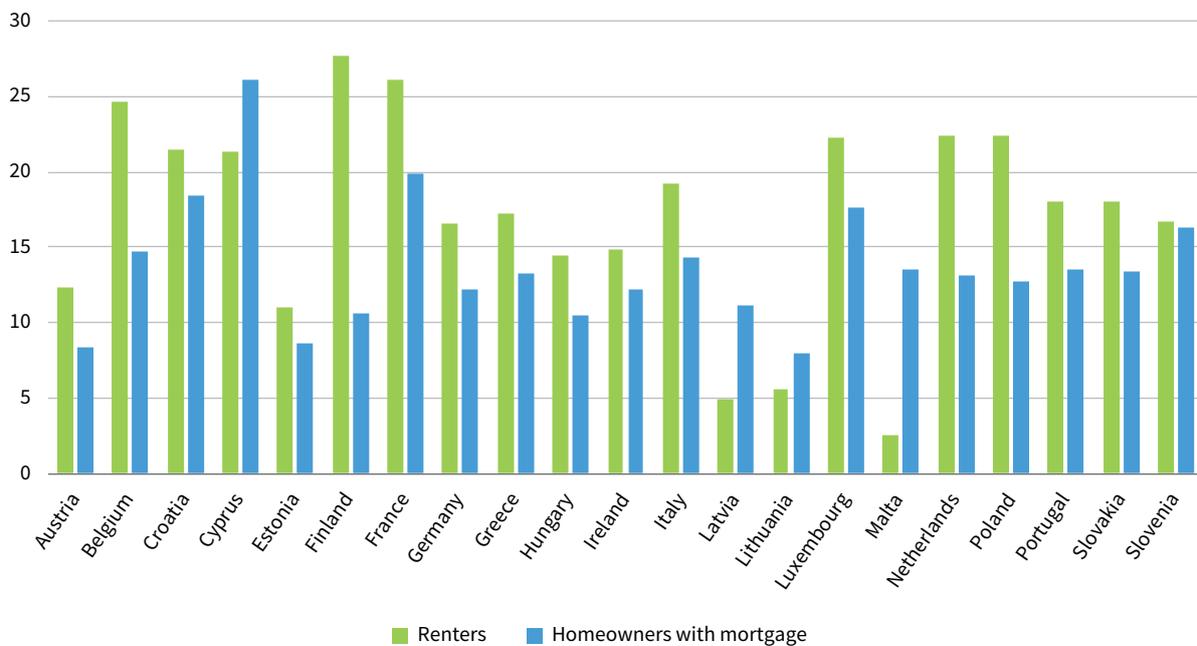
Housing cost burden

The research compared the housing cost burden (also known as the effort rate, which corresponds to housing expenses divided by income) on those who either purchased/built a property with a mortgage (group 5 in Table 7) or rent their residence (group 7), focusing on those who neither inherited or received as a gift their main residence nor own any other property.

Unsurprisingly, homeowners (group 5) are much more well-off than renters (group 7). In most countries (except Cyprus, Latvia and Malta), the median renter pays a higher proportion of their income on rent than a mortgage holder pays on their mortgage (Figure 40). However, this result is due to the characteristics of renters and mortgage holders. Individuals with lower assets and lower incomes to start with are less likely to be able to obtain a mortgage.

Focusing on households in which no individual is above 65 years (income dynamics differ substantially at this age), a regression was run of the effort rate on a dummy variable indicating whether individuals rent or have a mortgage, on their income level, on their wealth level and on the age of the oldest individual in the household. The results differ considerably across countries; however, for most, renting compared to paying a mortgage does not make a significant difference to the

Figure 40: Housing cost burden of homeowners and renters: median rent or mortgage payment/gross income, 21 HFCS countries, 2017 (%)



Source: Calculations based on the 2017 HFCS

effort rate. The exceptions to this are Poland (where the effort rate is 12.7 percentage points higher on average for renters) and Finland (where the effort rate is 13.7 percentage points higher for renters). Dewilde and De Decker (2016) likewise show, through EU-SILC, that effort rates are larger for renters than for homeowners when comparing individuals in the same income quintiles.

This means that, for many households, the most significant barrier to accessing mortgages is not that a mortgage would be substantially more expensive than rent. House prices and rental prices tend to move in tandem. Instead, tenant households are obliged to surrender a great part of their income for housing but are unable to transition into homeownership, as their low wealth levels might make them too risky for a mortgage loan.

Latvia and Lithuania have extremely low average effort rates for renters, below those of mortgage owners. Austria and Germany have some of the lowest effort rates for renters in western Europe, while Finland, France, Luxembourg, the Netherlands and Poland have the highest.

Key points

- Having parents who owned a property is associated with a significantly higher probability of the respondent also owning a property, controlling for various factors.
- Higher housing wealth is associated with higher probabilities of better educational achievements of children, with greater prospects for social mobility.
- The median renter pays a higher proportion of their income on rent than a mortgage holder pays on their mortgage, but when controlling for income, wealth and age, renters are not at a disadvantage in terms of this proportion compared to mortgage holders in most countries.
- Results suggest that many tenant households are unable to transition into homeownership, as their low wealth levels can prevent them from obtaining a mortgage loan.

4 Wealth and social mobility

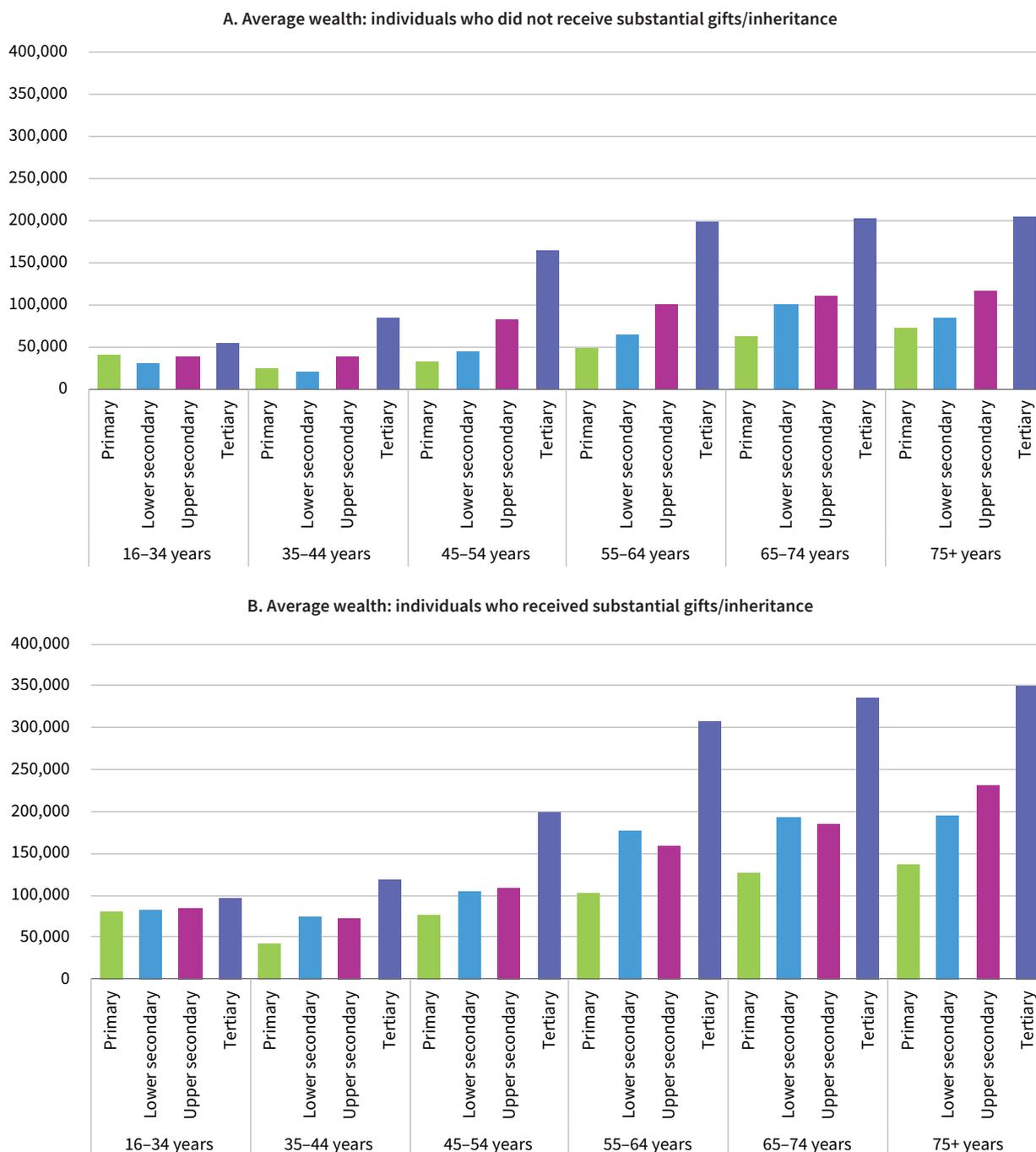
Introduction

Wealth can have an impact on social mobility in various ways, as was discussed in Chapter 1. This chapter assesses the impact of various factors on educational and wealth mobility, and the role that parental wealth

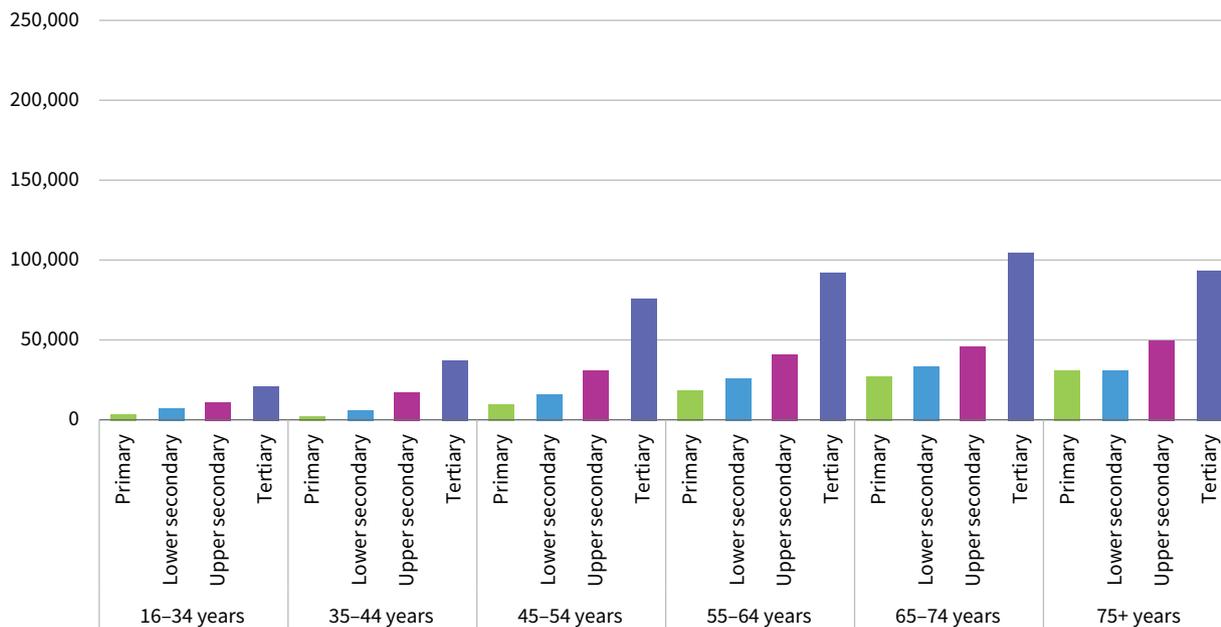
plays in such mobility, for a large number of European countries.

To introduce the topic, Figure 41 presents some descriptive statistics to determine whether those who have received substantial gifts or inheritances are

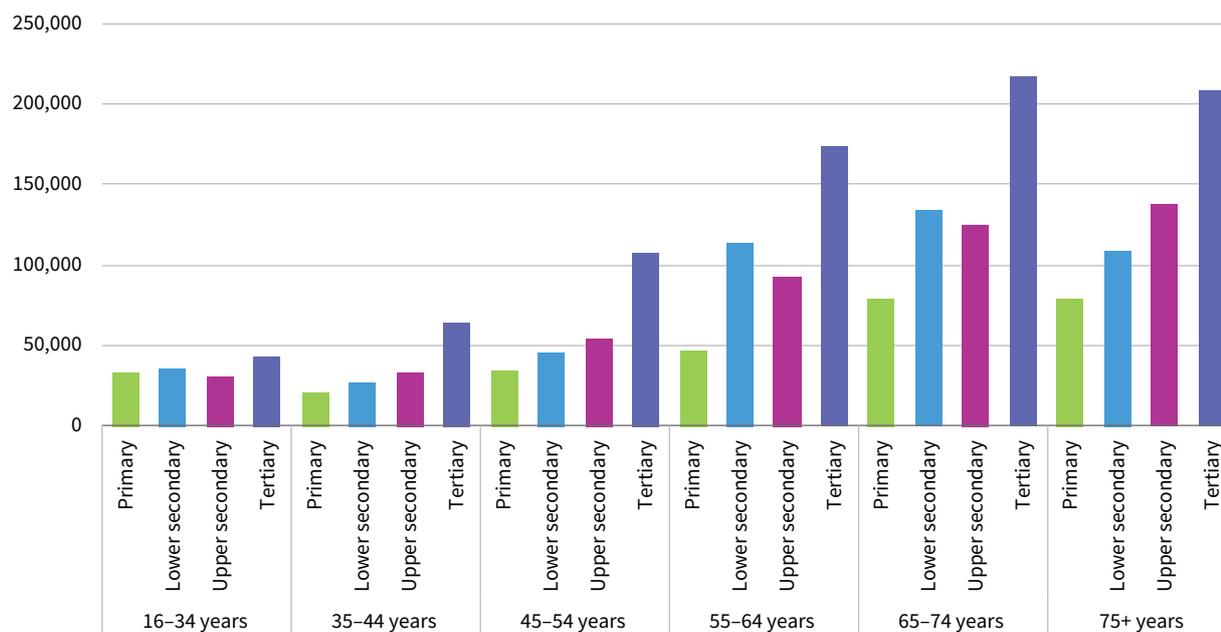
Figure 41: Net wealth across age and education groups according to receipt of substantial gifts or inheritances, 21 HFCS countries, 2017 (€)



C. Median wealth: individuals who did not receive substantial gifts/inheritance



D. Median wealth: individuals who received substantial gifts/inheritance



Notes: The vertical axis shows net wealth per capita. Age and education groups are in relation to the total sample of individuals in all households. Substantial gifts or inheritances are interpreted by the respondents, who are asked about the number of instances they received such inheritances and gifts, and the date, asset types, values and donor for up to three of the most important transfers and gifts. The data reported in this figure consider only whether substantial inheritances or gifts were received or not, but not their other characteristics.

Source: Calculations based on the 2017 HFCS

wealthier than those who have not.¹⁶ Age and educational level are considered, given their impact on wealth. Clear wealth persistence is observed, whereby

individuals whose households have received a substantial gift or inheritance are wealthier on average for each age-education combination.

¹⁶ The HFCS asks about 'substantial' whereas SHARE asks about value over €5,000. In the HFCS, respondents were asked whether they had received inheritances or substantial gifts. If the respondent asked for clarification about 'substantial', the interviewer clarified that the gift or inheritance had had an impact on the financial situation of the household. In case of a positive answer, the respondent was asked about the number of such gifts or inheritances received, and the following details for up to the three most important transfers and gifts: when they were received, what asset types were received, their value and from whom they were received.

Whether looking at average or median wealth, a very similar story can be seen, namely that there is an advantage conferred by wealth transfers. However, median wealth is substantially lower than average wealth, particularly for those who have not received any substantial inheritance. For example, for individuals aged 45–54 years with primary education, average wealth per capita amounts to €33,000, whereas their median wealth per capita is less than €10,000.

There is an association between educational attainment and wealth outcomes in all countries: individuals with a university education are overrepresented in the top 5% wealth quantile (Figure 42).

The relative advantage conferred by higher education is largest in Hungary, Slovakia and Latvia, where the proportion of university degree holders is much larger in

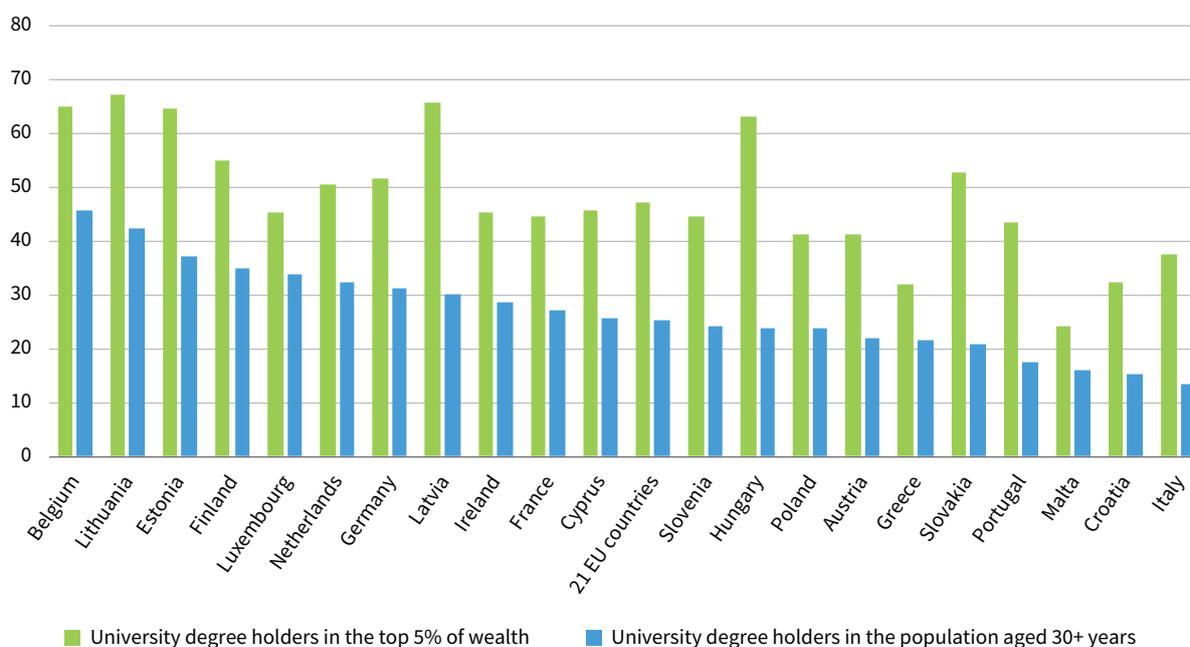
the top 5% in terms of wealth than the proportion in the total population aged 30 years and over. This gap is smallest in Malta, Greece and Luxembourg.¹⁷

This association will be explored in more detail in the following sections which explore wealth mobility, intergenerational educational mobility and how parental wealth can translate into better educational outcomes.

Key points

- Individuals who received a substantial inheritance have substantially higher median and average wealth than those who did not, regardless of age cohort and education level.
- Tertiary educational attainment is associated with substantially higher wealth than other education levels.

Figure 42: Proportion of university degree holders in the top 5% of the net wealth distribution, 21 HFCS countries, 2017 (%)



Source: Calculations based on the 2017 HFCS

¹⁷ The HFCS sample is not exactly representative in terms of educational level and hence the values reported for the proportion of people in the population aged 30+ years with a university degree is not identical to what Eurostat population statistics show.

Box 3: Model for assessing educational mobility and wealth

Intergenerational educational mobility, that is, whether children will have a higher (or lower) educational achievement than their parents by the time they grow up, is a key element in social mobility. Important questions include whether or not parental education level influences the educational level of offspring, and whether or not wealth plays an additional role in fostering educational attainment beyond parental education level. A related question is whether or not the obtaining of tertiary education by those people who have not received a substantial wealth transfer from their parents can compensate for the lack of wealth transfer. The prerequisite for such an analysis is data on educational levels of parents and descendants, and information about parental wealth.

In the HFCS, educational information is available for Italy (all editions), Portugal (second and third editions) and Luxembourg (third edition). Information on parental wealth is unfortunately not available in the HFCS; however, whether or not offspring have received a gift or inheritance can be considered a proxy for parental wealth. This allowed some estimates to be made, which were then checked by using other proxies available in the HFCS and by using the richer information on parental wealth from SHARE.

The tool used for further analyses was a cross-sectional ordered probit model, in which the probability of achieving different levels of education was assessed. The estimate of the probability of completing a certain level of education depended on which variables were controlled for in the model. First, this probability was assessed in relation to the parents' level of education but also controlling for the respondent's age and gender (initially without any information on wealth). In the next stage, wealth proxies were included in the model to see if they affected educational mobility beyond the impact of parents' education. The HFCS data posed challenges for analysis, as not all respondents provided information on educational attainment for both themselves and their parents; in addition, certain rare parent-offspring combinations were not available in some of the actual samples (the econometric specifications; an outline of how these issues were approached is available in the working paper that is published along with this report (<http://eurofound.link/ef20034>)).

Educational mobility

Recently, there has been renewed interest in educational mobility. For instance, Colagrossi et al (2019) presented evidence from the Eurobarometer survey carried out in 2017 showing a high persistence of educational attainment in the EU. In particular, achieving a tertiary education is highly dependent on whether one's parents – as well as grandparents – had received a tertiary education. Breen (2010, 2019) demonstrates that the equalisation of opportunities and the expansion of educational systems contributed to social fluidity in a number of European countries; the general trend through the mid-20th century was a rise in average educational attainment and a reduction of the extent to which one's social background determined educational attainment. However, according to Breen (2019), prospects in the 21st century are changing: the inequalities have shifted from low to higher educational levels.

The HFCS and SHARE can provide additional evidence on intergenerational educational mobility across cohorts. These data are of particular interest, as they enable an examination of factors related to parental wealth that could shape the educational attainment of children.

Educational mobility: Evidence from the HFCS

The HFCS evidence is largely in line with other research, as it shows a strong link between parents' and children's educational attainment, a decrease in mobility (namely an increasing impact of parents' higher education on children's outcomes) in younger cohorts and fathers' education having a stronger impact than that of mothers.

The analysis of the HFCS data of Italy, Luxembourg and Portugal shows that having a father with higher levels of education is associated with a substantial increase in the likelihood of individuals achieving a tertiary education and a decrease in the probability of achieving only primary education.

For instance, in Italy, for someone born in 1985, the probability of achieving a university education is 15% when the father has only a primary education, while it is 70% when the father has a university education. This gap of 55 percentage points is shown in Figure 43B: see the purple bar for those born in 1985 (similarly, for other bars (cohorts)).¹⁸

¹⁸ The methodology of these calculations is detailed in the working paper accompanying this report, which also provides further examples of how to interpret average marginal effects.

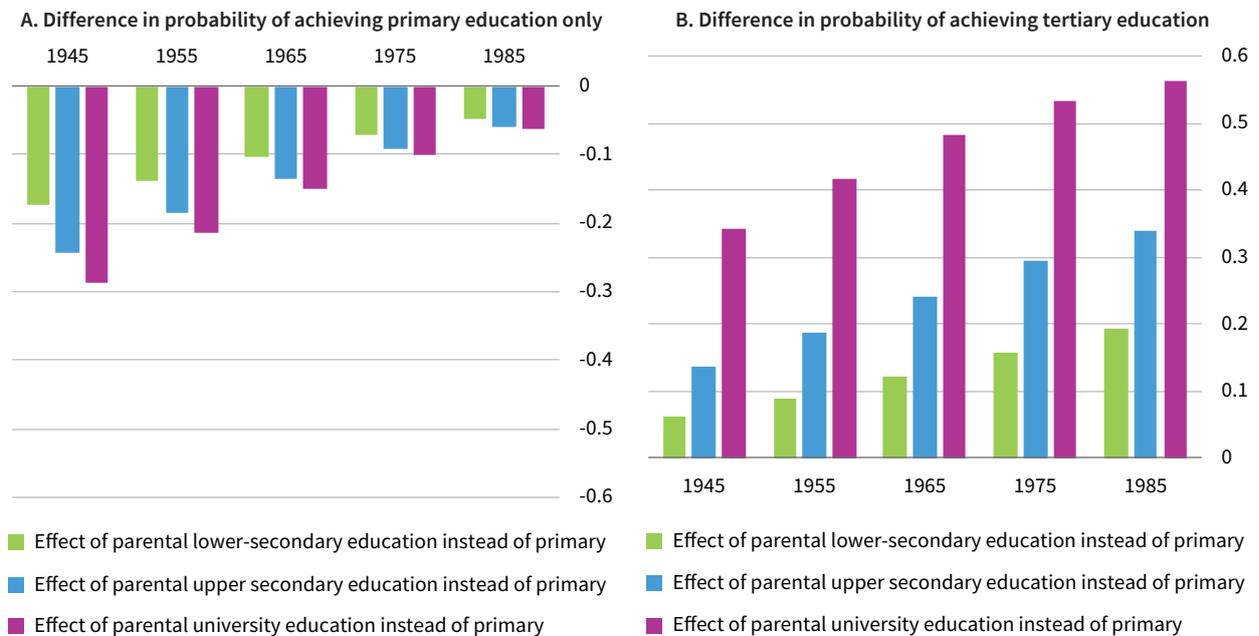
Similarly, in Portugal (not shown), for someone born in 1985, the probability of achieving a university education is 32% when the father has only a primary education, while it is 84% when the father has a university education. In Luxembourg, these probabilities are 26% and 70%, respectively.

The probability of achieving only a primary education in Portugal for someone born in 1985 is 22.5% if the father has only a primary education but 1.1% if he has a university education. In Luxembourg, these probabilities are 15.8% and 1.4% and, in Italy, they are 7.3% and 0.2%, respectively.

The effects differ a lot depending on the age of individuals, suggesting that the advantages conferred by parental educational background change over time

and, most likely, with the contemporary structure of education in the country. For instance, in Portugal, parental education appears to be much more strongly associated with going beyond primary education than in Luxembourg.¹⁹ This can be explained by the fact that, over the same period, Luxembourg had much more widespread primary education than Portugal. Likewise, the finding that, through time, parental education becomes less associated with primary education achievement (Figure 43A) in the three countries is likely to be attributable to the effectiveness of compulsory mass education. However, parental education has become a more important determinant of children’s tertiary educational achievement in more recent decades, despite the growing overall number of university graduates.

Figure 43: Average marginal effect of fathers’ education on the probability of children achieving different education levels – Italy



Notes: In part A, a negative value indicates that a higher parental educational level decreases the probability of achieving only primary education, that is, it increases the probability that the respondent will go beyond primary education. All average marginal effects are statistically different from 0 at the 1% level. Italy is chosen as an example, but Luxembourg and Portugal have a similar pattern across the cohorts and education levels.

Source: Calculations based on the HFCS

19 See the detailed results in the working paper.

Educational mobility: Evidence from SHARE

SHARE data are much richer and allow more comprehensive models to be set up. The following variables are examined in this section:

- the material conditions of respondents when they were children: rooms per capita at age 10 and whether the house had any of the following: a fixed bath, running water, running hot water and central heating;
- self-reported school performance: whether the individual was much worse, worse, about the same, better or much better than their peers in mathematics and languages at school at age 10;
- the intellectual environment during upbringing, based on the number of books in the house at age 10.

SHARE is a survey of individuals aged 50 and over, in other words, people at a phase in life when they can provide useful information on three generations: about themselves, about their parents and about their children. Social mobility is analysed for both the respondent (by considering their parental circumstances) and the children of the respondent.

The relationship between the education of parents and of respondents, as measured by average marginal effects, is strong in SHARE data, despite the presence of important control variables listed above.

In the case of Italy and Luxembourg, the two countries in both the HFCS and SHARE, the association between parents' educational attainment and that of respondents exhibits the same pattern over time: parental education has been less relevant for going beyond primary school in more recent years, and it has become more strongly associated with achieving a university education.

In terms of magnitude, the decrease in the probability of achieving only a primary education and the probability of achieving a tertiary education associated with improved parental education is smaller in SHARE than in the HFCS. This is expected, given that the model using HFCS data does not include important variables, which are included in the model using SHARE data: conditions during upbringing and innate abilities. In other words, this suggests that, even though parental education appears to be a powerful determinant of children's educational attainment, other circumstances of the highly educated parents may also play a role.

In all of the countries considered except Czechia, Germany and Spain, having a father with a university education instead of only a primary education is significantly associated with a lower probability of achieving only a primary education (Figure 44A). In all countries except Czechia and Germany, it is also significantly associated with a higher probability of achieving a university education (Figure 44B).

Looking at the children of respondents, higher parental education is a significant factor that decreases the probability of achieving only a primary education and increases the probability of achieving a university education in all countries.²⁰

Key points

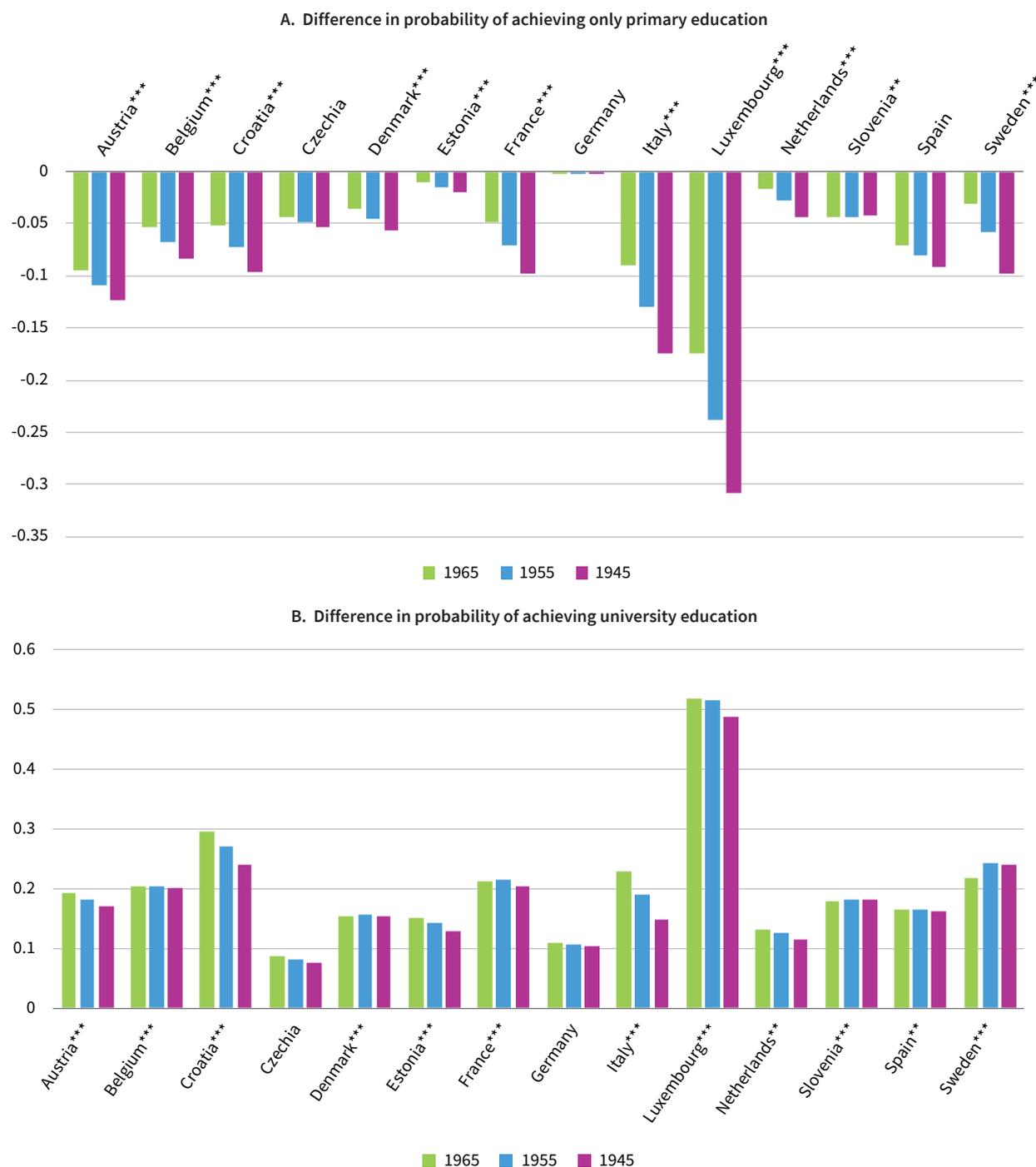
- For 12 of the SHARE countries, the results show the same pattern observed for the three HFCS countries: the impact of parental education is strong and leads to offspring having an education level beyond the contemporary standard.
- The only exceptions are Czechia and Germany, where parental education is not significantly associated with educational attainment, after controlling for upbringing conditions and young age achievement, among other factors, even though the direction of the estimated impact is the same as for the 12 other countries.

The models above, which analysed the intergenerational transmission of advantage, focused on the advantages provided by the preceding generation – parents. In the analysis conducted in the background (results available in the working paper), the persistence of educational attainment was assessed by also considering the education of grandparents.

- For 9 out of the 14 countries considered, the education of the grandfather was statistically associated with the education of grandchildren, even when controlling for parental wealth, income, educational achievement and performance in school vis-à-vis their peers. Grandfathers' education was particularly relevant in France and Luxembourg.
- The higher education of grandfathers seemed to be associated with grandchildren's educational outcomes in two ways:
 - it decreased the probability of grandchildren having low educational achievements when their fathers had a low level of education
 - it increased the probability of grandchildren having a university education, regardless of parental education

²⁰ It should be noted that the analysis of the respondent's parental impact on her/his children does not include controls for innate abilities or conditions during upbringing, as such information is not available for the children of respondents.

Figure 44: Average marginal effect of having a father with a university instead of a primary education on the probability of achieving different education levels (difference in probability), SHARE countries



Notes: The model controls for age, gender, cohort, material and intellectual upbringing conditions and the proxy for cognitive abilities as listed at the beginning of this section (rooms, basic amenities, cognitive performance and the number of books at home in childhood). In part A, a negative value indicates that a higher parental educational level decreases the probability of not going beyond primary education, that is, it increases the probability that the respondent will go beyond primary education. All average marginal effects were statistically different from 0 at the 1% level (***) except in Slovenia (only significant at the 5% level: **) and in Czechia, Germany and Spain (not statistically different from 0 at the 10% level: no asterisks). In part B, in Spain, the average marginal effect of parental university education was different from 0 at the 5% level for those born in 1965 and at the 10% level for those born in 1955 and 1945. In the Netherlands, all average marginal effects were significant at the 5% level. In the remaining countries marked with statistically significant effects, average marginal effects were statistically different from 0 at the 1% level (***)

Source: Calculations based on the HFCS

Impact of parental wealth on educational attainment

Wealth effects: Evidence from the HFCS

Parental education might be positively associated with wealth accumulation, which, in turn, leads to better educational outcomes for descendants. In trying to assess the effects of parental wealth on educational outcomes through the HFCS, whether or not the respondent had received substantial gifts/inheritance was used as a wealth transfer variable. A positive response was considered a proxy for wealthier parents.

This is bound to be an imperfect proxy.²¹ A wealth transfer might signal increased parental involvement in the respondent's life, which would thus have a positive effect on educational outcomes, regardless of parental wealth. Furthermore, a wealth transfer can also serve to compensate children whose financial achievements are below expectations, perhaps due to suboptimal educational achievement.

This section investigates 1) if a wealth transfer (beyond the impact of parental education) is significant for educational outcomes and 2) if it influences how parental educational background affects children's education.

Impact of wealth transfers on educational outcomes²²

For Italy, Luxembourg and Portugal (the three countries for which data are available in the HFCS), the receipt of substantial gifts or inheritance is correlated with better educational outcomes, increasing the probability of achieving a tertiary education.

For these three countries, the impact of parental wealth transfers on achieving a university education has increased in recent decades: those who were born in 1985 benefited from a larger increase in the probability of achieving a university education after a wealth transfer than those born in earlier decades (purple lines in Figure 45).

At the same time, the impact of parental wealth transfers on ensuring that individuals go beyond primary school has decreased (that is, the values along the green lines in Figure 45 become smaller in absolute terms): for older individuals, a wealth transfer from parents reduces the probability of not going beyond primary school more than it does for younger individuals.

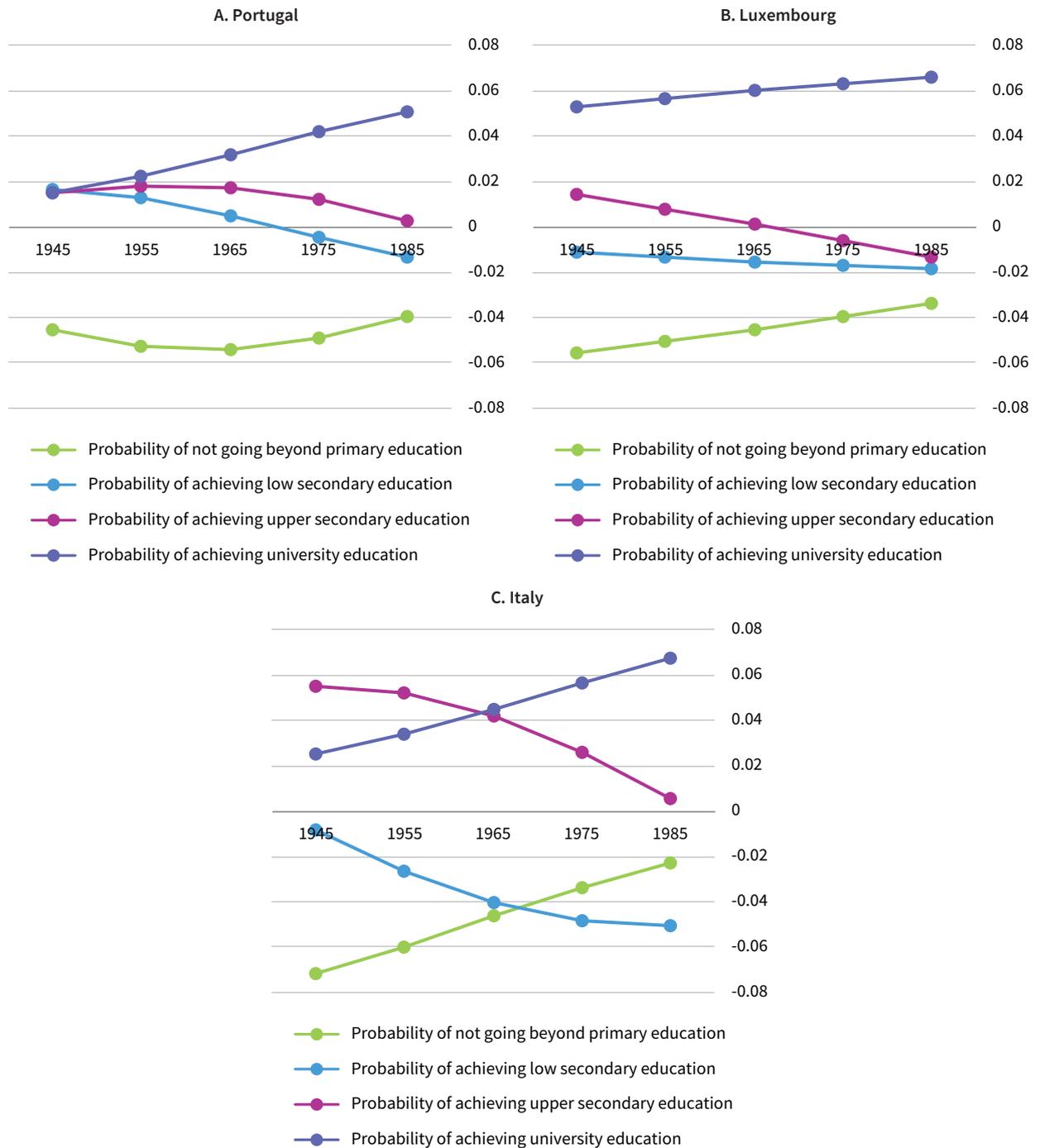
These changes through time might be related to educational reforms, which have raised minimum schooling requirements across the board and expanded the capacity of university education. Nevertheless, wealth transfers remain associated with accruing educational advantages vis-à-vis the rest of society.

For instance, in Portugal, for 70-year-olds, a wealth transfer increased the probability of education above primary school. For a 30-year-old, it increases the probability of going beyond lower secondary education. Among individuals above 60 years of age, 75% did not go beyond primary school; thus, any schooling above this level would be a comparative advantage. Looking at individuals between 30 and 40 years of age, however, only 38% did not go beyond a lower secondary education.

21 There is information on the value of the gifts when they were given, but this does not provide information on how important they were for the household (there is no information on past wealth). Importantly, the same gift in 1950 is not equivalent to such a gift in 2000. In the future, research could try to normalise these values, for instance by GDP per capita, as the year when the gift was made is unknown.

22 While a wealth transfer could come from any member of the family and even from non-family members such as a friend, colleague or priest, the source is predominantly parents and hence, for simplicity, it is considered a parental wealth transfer throughout this report.

Figure 45: Average marginal effect of wealth transfer (gifts or inheritance) on the probability of different educational outcomes (difference in probability)

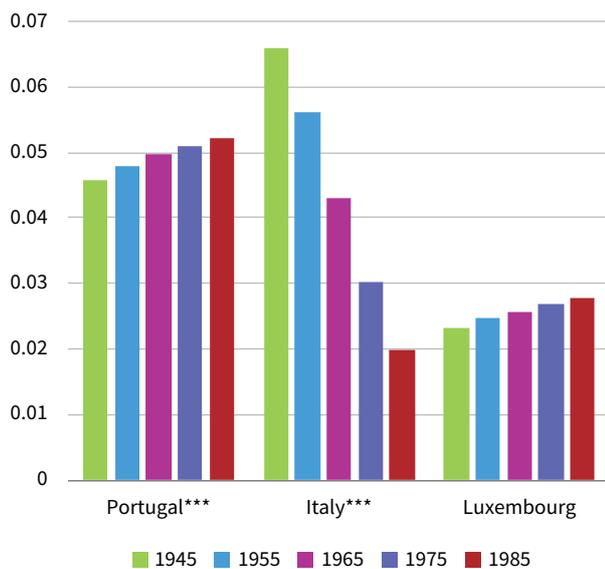


Note: A negative value in the case of the green line indicates that a substantial wealth transfer or inheritance decreases the probability of achieving only primary education, that is, it increases the probability that the respondent will go beyond primary school.

Source: Calculations based on the HFCS

Consistent with these findings, for Portugal and Italy (but not Luxembourg), wealth transfers were a statistically significant contributing factor in increasing the probability of respondents being in the top 50% of educational outcomes among their 10-year age cohort (Figure 46).²³

Figure 46: Average marginal effect of wealth transfers on the probability of being in the top 50% of one's 10-year age cohort in terms of educational attainment (difference in probability)



Notes: In the case of Portugal and Italy, all average marginal effects are significant at the 1% level (***). None are significant for Luxembourg.

Source: Calculations based on the HFCS

Impact of parental wealth transfers on the association between parental and offspring's education

When controlling for the wealth transfer indicator, the association between parental education and offspring education remains strong, suggesting that omitting wealth from the earlier calculations did not distort the

results much.²⁴ This finding, of course, does not mean that parental wealth does not matter for educational outcomes: the calculations reported in the previous section indeed show that parental wealth has an additional impact on offspring education beyond parental education.

Key points

- Parental wealth, similar to parental education, is translated into educational advantage for offspring vis-à-vis contemporary educational standards.
- Even when wealth is considered, large effects of parental education remain.

Wealth effects: Evidence from SHARE

The same approach using a cross-sectional ordered probit model is applied to the SHARE dataset. In addition to the variables introduced in the section 'Educational mobility: Evidence from SHARE', the following are considered:

- a dummy variable indicating whether or not the respondent has received substantial financial gifts or inheritance – 'substantial' is quantified as worth €5,000 or more, as opposed to being left to the interpretation of the household
- the wealth of the respondent

The analysis considers whether substantial financial gifts remain significantly associated with higher educational attainment when including variables related to the circumstances of the respondent at age 10 (a proxy of parental wealth). If it is still determinant, parental wealth can be considered as playing a role in educational outcomes beyond material conditions during upbringing, which is not explained by the correlation with innate abilities or the number of books in the household during upbringing.

Separate models were used to analyse the role of parental wealth in relation to 1) the parents of respondents and the respondent, and 2) the respondent and her/his children.

²³ Respondents are grouped into those aged 30–39, 40–49, 50–59, 60–69 and 70+ years. The research considered, for each country and for each cohort, what level of education would place individuals in the top 50% in terms of educational attainment. For instance, for individuals aged 60+ years in Portugal, having a lower secondary, upper secondary or tertiary education would all mean being in the top 50% of the country in terms of education.

²⁴ All average marginal effects of parental educational attainment were significantly different from 0 at the 1% level.

It should be highlighted that, for the parents of the respondent, the wealth transfer indicator serves as a proxy for parental wealth, while detailed information is available for the wealth of the respondent. Therefore, for the children of the respondent, the actual value of parental wealth is known, which is an advantage. The disadvantage of the analysis of the role of parental wealth in relation to the respondent and her/his children is the absence of information on the upbringing of the children – no information is available on the material conditions of the house, school performance or the number of books in the house during upbringing (this information is available for the respondent when she/he was a child).

Thus, the models for the children of respondents used here use information on the school performance of parents and the number of books in the house where the parents lived when they were 10 years old, in order to still capture some degree of potential genetic endowment.

Results: Respondents

Separate models were used for each of the 14 countries included in SHARE for which more than 500 sampled observations with full information were available, namely Austria, Belgium, Croatia, Czechia, Denmark, Estonia, France, Germany, Italy, Luxembourg, the Netherlands, Slovenia, Spain and Sweden.

First, a model analogous to the HFCS was used, considering only gender, parental education, year of birth and whether or not the respondent received substantial gifts or inheritance.

The same patterns were observed through time: wealth was a determinant for going beyond primary education, although less so for younger respondents. For instance, for those born in Italy in 1945, receiving a substantial inheritance or gift was associated with a 15 percentage point lower probability of achieving only a primary education than for those who did not receive a substantial inheritance or gift. For those born in 1965, the reduction was 6.6 percentage points (Figure 47A).

Second, when adding variables on material conditions during upbringing, the school performance of respondents when they were children and the number of books in the house during upbringing, having received a substantial inheritance remained a statistically significant factor in achieving better educational outcomes for most countries.

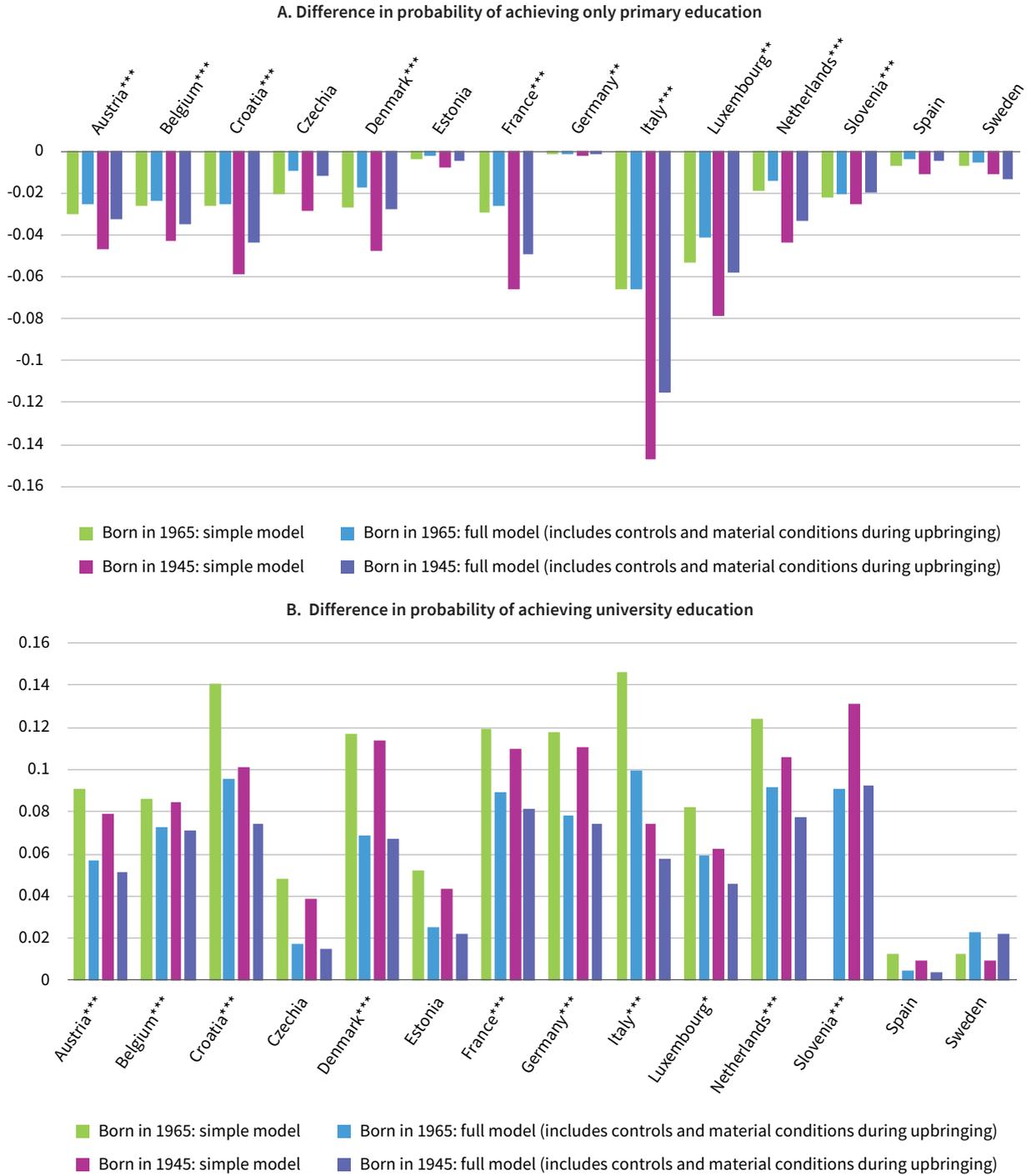
The estimated impact of a wealth transfer was smaller than in the case of the first model, but similar patterns over time remained. For instance, in Italy, a substantial inheritance or gift was associated with an 11 percentage point reduction in the probability of achieving only a primary education for respondents born in 1945. For those born in 1965, the reduction was 6.6 percentage points (Figure 47A).

In Italy and Luxembourg, wealth transfers were more strongly associated with achieving schooling beyond primary education than in the other 12 countries considered in these calculations.

Regarding achieving a university education, having received a substantial wealth transfer is significant in most countries, according to the model that controls for material conditions during upbringing. When comparing the respondents born in 1945 and 1965, the impact is larger for the latter group: the effect of receiving a substantial inheritance or gift on the probability of achieving a university education became more important in more recent decades (Figure 47B). This finding among a large set of countries using SHARE data is consistent with the above findings for the three countries in the HFCS.

In only Czechia, Estonia, Spain and Sweden was the receipt of a substantial inheritance or gift not a statistically significant factor in being able to go beyond primary education or in ultimately achieving a university education, although the point estimates (similarly to the other countries) suggest positive impacts.

Figure 47: Average marginal effect of receiving a substantial inheritance or gift on the probability of achieving different education levels (difference in probability), SHARE countries, all editions (2004–2017)



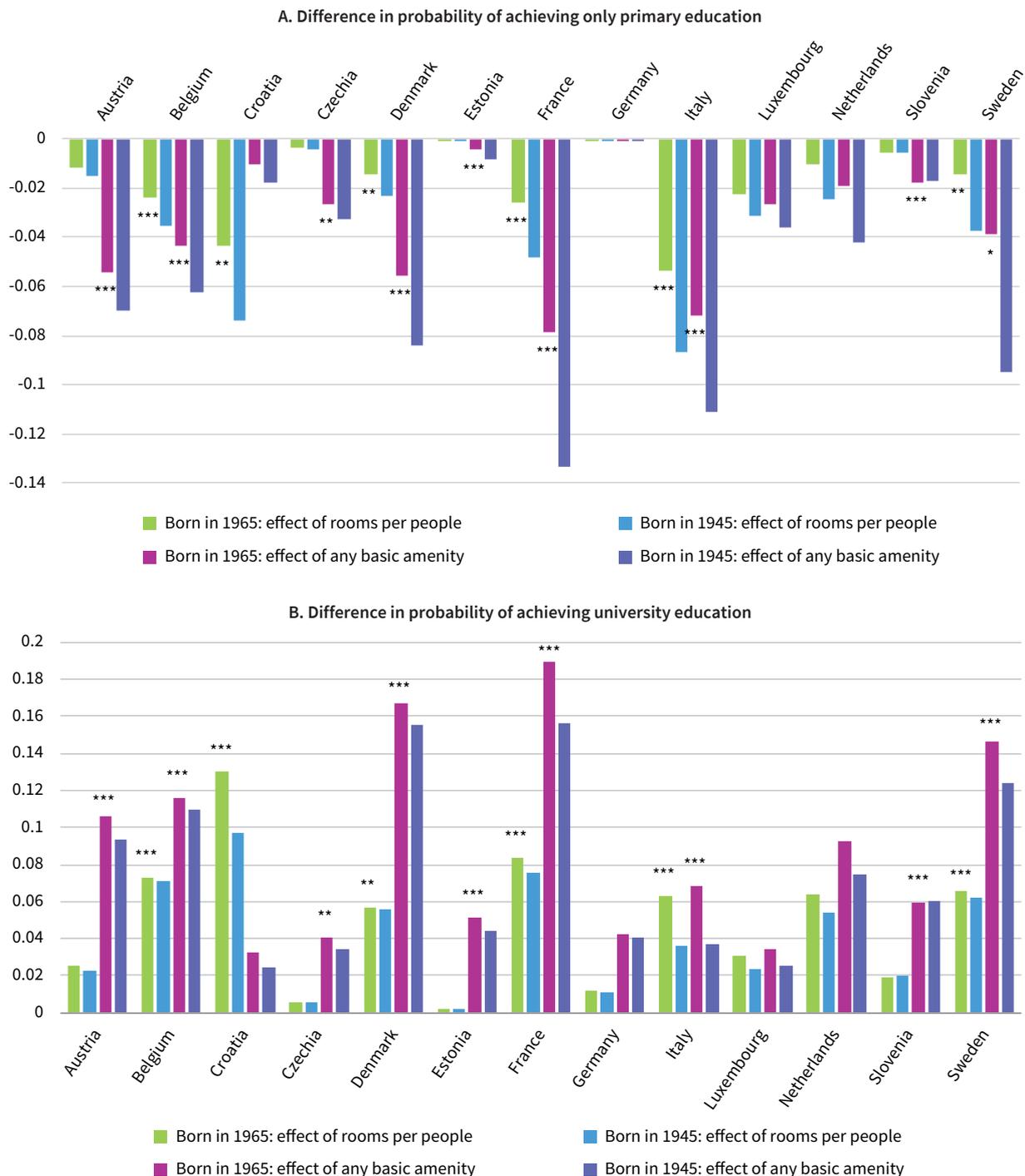
Notes: A country is marked with *** if the average marginal effect of having received a substantial inheritance or gift is significant at the 1% level for individuals born in 1965 under the full model (which includes controls and material conditions during upbringing), with ** if it is significant at the 5% level and with * if it is significant at the 10% level. If a country has no asterisks, it is not significant. The ‘simple model’ controls for gender, parental education and birth cohort. The ‘full model’ includes these factors and the material conditions during upbringing (rooms, basic amenities, cognitive performance and the number of books at home in childhood). In part A, a negative value indicates that a substantial gift or inheritance decreases the probability of achieving only primary education, that is, it increases the probability that the respondent will go beyond primary education.

Source: Calculations based on the SHARE dataset

For several countries, variables on material conditions when the respondent was a child (number of rooms per people in the house, and the presence of any of the four basic amenities mentioned earlier) and, in almost all of the countries considered, variables on a substantial

inheritance are significantly associated with better educational outcomes (Figure 48). This suggests that the positive effects of wealth are present at upbringing but also play a role at later stages.

Figure 48: Average marginal effect of material conditions during upbringing (rooms per people in household and any basic amenity) on the probability of achieving different education levels (difference in probability), SHARE countries, all editions (2004–2017)



Notes: Average marginal effects for 1965 are marked with *** if they are significant at the 1% level, with ** if they are significant at the 5% level and with * if they are significant at the 10% level. If a country has no asterisks, they are not significant. In part A, a negative value indicates that a better material condition decreases the probability of not going beyond primary education, that is, it increases the probability that the respondent will go beyond primary education.

Source: Calculations based on the SHARE dataset

For those born in 1965, having one of these features in the house during upbringing was associated with an increase of 7–8 percentage points in the probability of going beyond primary education in France and Italy, while the absolute value of this impact was slightly smaller in Austria, Belgium, Denmark and Sweden.

For Germany, Luxembourg and the Netherlands, the variables were not significant. This might be due to the amenities becoming widespread earlier and therefore there not being enough variation to assess their positive effect. Only in these three countries were both measures of material upbringing conditions (having the basic amenities in the house and the number of rooms per person) not statistically significant, while at least one of these measures was significant in 10 of the countries analysed and both were statistically significant in five countries.

A potential limitation of the model is that the amenity variable might be biased upwards if confounded by regional effects: certain regions, perhaps those that are more urban, may have these amenities earlier, and possibly also easier access to university. Even so, rooms per person remains a significant variable, highlighting that conditions during upbringing play a role. Another potential limitation relates to the potentially different sampling effects (SHARE samples are, potentially, not representative of their countries' population for the variables considered), and therefore cross-country comparisons of the magnitude of effects must be undertaken with care.

The working paper published alongside this report shows the parameter estimates of all variables in the model when analysing the probability of achieving tertiary education using the SHARE dataset. For most countries, the estimated impact of wealth transfer is about one-half or one-third of the impact of father's tertiary education. The estimated impact of basic amenities in the house when the respondent was 10 years old is broadly similar to the impact of wealth transfer, while rooms per person when aged 10 years is also statistically significant for most countries. Taken together, the sum of the impacts of the wealth transfer variable, the basic amenities when 10 years old variable and the rooms per person variable (all of which are related to the wealth of parents) has a magnitude similar to the estimated impact of father's education in most countries, underlying the high importance of both parental education and parental wealth. The additional variables in the model (books at home when 10 years

old and mathematics and language performance at school when the respondent was 10 years old) also have additional explanatory power beyond parental education and parental wealth for most countries.

Results: Children of respondents

When looking at the children of respondents, the model uses direct variables on respondents' wealth (maximum and minimum wealth reported²⁵) and respondents' income once the child turned 30 years old and a variable on whether children received substantial financial gifts from parents.

Higher levels of both maximum and minimum wealth are related to higher educational attainment of the respondents' children.

These findings, like the findings on respondents, support the existence of a dual effect of wealth: parental wealth ensures living standards that are fundamental during upbringing and provides a buffer for young adults, allowing them to rely on parents for financial support.

Financial gifts, conditional on wealth and income levels, are statistically significant for the educational outcomes of children only in Austria, Germany and Italy. Parental wealth levels are strongly associated with educational outcomes, while these direct wealth transfers do not have such a strong association. Therefore, circumstances other than direct financial gifts may capture the benefits of parental wealth better, such as the possibility to remain within the parental household for longer or to return in unforeseen circumstances. Higher levels of parental wealth are indeed associated with leaving the household later in life, as well as with higher educational attainment.

When looking at the children of respondents, only gifts that were given while the parents were alive are considered in the dataset, and thus the variable showing the receipt of substantial gifts by the children of respondents is not an ideal proxy of parental wealth in this case.²⁶

Individuals with wealthier parents appeared to have advantages compared to the general population, which cannot be explained by their 'inherited' cognitive levels or by the number of books in the parents' house during their childhood.²⁷ As the educational levels of a society overall increase, parental wealth may still fuel relative educational advantages for children through, for instance, higher quality education. Whenever there is a

²⁵ Respondents report on their wealth once every edition. The maximum and minimum wealth reported across their various interviews was used.

²⁶ The variable of substantial gifts given to children is built on the basis of what respondents reported. Respondents were asked whether they had given substantial gifts to their children (and to which child exactly).

²⁷ As noted earlier, the material and intellectual conditions of upbringing and their self-reported school performance as children (which serves as a proxy for cognitive skills) are available for the respondent, but not for her/his children. When analysing the children of respondents in this section, such information from their parents' childhood is included in order to capture some degree of potential genetic endowment.

substantial actual or perceived difference in quality between, for example, the same degree at different universities, one can expect relative advantages to persist.

Key points

- The association between parental wealth proxies and higher educational attainment is present when considering both the benefits to respondents' education stemming from their parents' wealth and the benefits to the educational outcomes of the children of respondents stemming from respondents' wealth.
- In the presence of a number of controls, parental wealth proxies remained a major determinant for higher educational attainment, confirming the results from HFCS data.
- Wealth was an essential determinant of going beyond primary school education for older respondents but less so for younger respondents, as educational reforms impacted on society at large.
- Better housing conditions during upbringing were significantly associated with better educational outcomes.
- The effect of parental wealth on the education of descendants is twofold: parental wealth ensures minimum living conditions, which are fundamental during upbringing, and provides a buffer for young adults, allowing them to rely on parents for financial support.

Wealth mobility

The exploration of wealth mobility presented here is based on the evidence from SHARE. SHARE includes more proxies of parental wealth than the other datasets considered and hence the research investigated how the wealth of respondents is affected by these parental wealth proxies, and if parental education plays a role beyond respondents' education in wealth accumulation.

Two models were used: first, a regression by country of the logarithm of maximum wealth of respondents on parental wealth proxy variables, alongside control variables such as the education of respondents and parents, income, age and gender;²⁸ and, second, linear probability models by country, in which the average effect of these variables on the probability that an individual belongs to the top wealth decile of individuals aged over 50 was observed.

In the case of the maximum wealth regressions, first, the sample was restricted to individuals whose parents had passed away to capture the full effect of inheritance. Second, the maximum wealth of individuals while their parents were alive was used to infer how parental wealth related to the wealth of respondents before they received the inheritance – although the parents could have provided gifts.

Wealth was measured in current PPP across all years, namely, in 2004, it refers to 2004 PPP and, in 2017, it refers to 2017 PPP, always representing a measure of the current consumer basket. The analysis was limited to 10 countries for which more than 500 observations with complete variable information were available: Austria, Belgium, Czechia, Denmark, France, Germany, Italy, the Netherlands, Slovenia and Sweden.

Analysis of results

The country-specific regressions for respondents whose parents had passed away show that having received a substantial inheritance or gift (measured as a gift/inheritance worth €5,000 or more) is strongly associated with higher wealth, which was always significant in the wealth regressions. In Czechia, gifts or inheritance were associated with 36% higher wealth and, in the Netherlands, this figure was 87% (Table 13A).

When 'removing' the effect of inheritance – by considering wealth when parents were still alive – the prospect of an inheritance or having received substantial gifts was still associated with higher wealth, with an effect ranging from 38% in Denmark and France to 82% in Austria (Table 13B). This means that, in Denmark or France, the wealth of individuals who had received a substantial gift or would in time receive a substantial inheritance was 38% higher than the wealth of individuals who had not received a substantial gift and would not receive a substantial inheritance. Thus, even before parents pass away, the gifts received (or other advantages proxied by substantial inheritance to come) determine wealth levels.

Logically, wealthier individuals are more likely to give away substantial gifts. Importantly, the research found that these gifts were quite frequent – 30% of individuals in the top wealth decile of their countries' population over the age of 50 years gave gifts worth €5,000 or more in the years when they were interviewed for SHARE.

Effect of education

Education was likewise always significant for the wealth of individuals and, in most cases, significantly more so while parents were still alive, signalling that inheritance blurs the divergence in wealth conferred by education (Table 13).

28 Respondents report on their wealth once every edition. The maximum and minimum wealth reported across their various interviews was used.

Table 13: Average marginal effect of a substantial financial gift or inheritance and university education on maximum wealth reported, SHARE countries, all editions (2004–2017) (%)

A. Maximum wealth across all editions		
Country	Substantial gift/inheritance	University education
Austria	72	48
Belgium	64	92
Czechia	36	41
Denmark	64	37
France	40	35
Germany	71	247
Italy	55	48
Netherlands	87	74
Slovenia	53	286
Sweden	36	32

B. Maximum wealth across the editions in which parents are alive		
Country	Substantial gift/inheritance	University education
Austria	82	Not significant
Belgium	43	85
Czechia	58	90
Denmark	38	Not significant
France	38	80
Italy	51	108
Slovenia	71	Not significant

Notes: The values show a change in the logarithm of maximum wealth multiplied by 100. Variables were significant at the 5% level for all countries, except for university education in Germany (in part A) which was only significant at the 10% level. In addition, only individuals whose parents passed away were considered in part A. Only countries with more than 500 observations were considered. **Source:** Calculations based on the SHARE dataset

In Austria, Denmark, France, Italy, the Netherlands and Sweden, the average gain in wealth owing to gifts or inheritance was superior to the gain associated with having a university degree instead of a primary education. In Belgium, having received a substantial inheritance or gift was more valuable in terms of wealth than having a lower secondary degree instead of a primary education. In Belgium, Czechia and Slovenia, a university degree was more strongly associated with wealth than inheritance.

Education can boost wealth but, in many countries, it cannot compete with the advantages of inherited wealth, including partly because of the higher educational achievements of the children of wealthier parents. Parental wealth is a determinant of respondents' wealth, even after controlling for early school performance, material conditions in early

childhood and the number of books in the house, supporting the idea that the financial safety net provided by parental wealth is important.

Early life material conditions are, in most cases, not statistically significant for wealth levels and thus appear to instead affect wealth indirectly through educational attainment, as the results for educational mobility demonstrate.

Probability of belonging to the top wealth decile

Tertiary educational attainment was found to be a statistically significant factor for being in the top wealth decile across all countries except Denmark and Germany. Once income level was controlled for, education was also not significant in France and Sweden. However, education probably influences income and thereby matters for wealth in France and Sweden too. As expected, income was always strongly positively associated with the probability of belonging to the top wealth decile.

The probability of belonging to the top wealth decile among individuals aged 50 and over was strongly related to the inheritance received. This was especially relevant in the Netherlands, Austria and Slovenia, where receiving an inheritance made the probability of being in the top wealth decile 13, 11 and 10 percentage points higher, respectively, than among those not receiving an inheritance. In Belgium, Denmark and Germany, this difference was between 5 and 6 percentage points.

Performing better than peers in maths at age 10 was associated with a higher probability of belonging to the top wealth decile in Austria, Germany and Sweden.

In Czechia, parents' education was a significant factor in respondents' probability of belonging to the top wealth decile, increasing this probability more than respondents' own education. When studying these results, historical developments at the time should be considered: in the educational mobility models, patterns can be observed that are possibly connected to decreased access to university from 1964 to 1990 in communist Czechoslovakia. Inheritance remained relevant for wealth levels, and its effect was the same before and after changes in university access. Direct wealth persistence remained. Limits to university access did not reduce direct wealth persistence but reduced educational persistence. Correlation between parental and offspring education is partly a manifestation of endowments and of education promotion. The probability of belonging to the top wealth decile was, however, still strongly associated with parental education directly, suggesting that more educated parents might have been able to confer some advantages to their children through means other than the official promotion of education – to which access was stifled – or that endowments manifested themselves in improved outcomes even in the absence of higher education.

A policy implication is that inheritance taxation is not all-encompassing for decreasing wealth inequality, as many advantages transpire outside transfers. Good living conditions in early life can be a powerful equaliser for the wealth achieved later in life thanks to securing good educational development. Therefore, public policies should aim to improve the living conditions of the poorest segments of society, ensure that the quality of public schooling is not inferior in poorer neighbourhoods to that in wealthier neighbourhoods and support the higher level educational achievements of young people from poor backgrounds. These policy issues are discussed in more detail in the ‘Public policies to equalise opportunities’ section of Chapter 5.

Key points

- In Austria, Denmark, France, Italy, the Netherlands and Sweden, for individuals aged 50 and over, the average gain in wealth associated with receiving an inheritance is higher than the average gain through having achieved a university education instead of a primary education. The stark implication is that the gain in wealth owing to education does not match the gain in wealth thanks to wealth transfer (gifts or inheritance).
- Advantages of parental wealth are transmitted over a life course – even while parents are alive, individuals who will in time receive considerable inheritance are already substantially wealthier, controlling for income, age and education.
- Early life material conditions affect wealth only indirectly, through educational outcomes.
- Offspring wealth is higher when parents are more educated, even after controlling for wealth transfers. This shows that parents who are more educated can transmit advantages to children in various ways, not just via transfers.

Conclusions

- There is manifest wealth persistence, whereby individuals whose households have received a substantial gift or inheritance are wealthier on average for each age–education combination.
- There is a clear association between higher educational levels and wealth outcomes.
- Using both the HFCS (available for only three countries) and SHARE (available for 14 countries) data, the research found that having a tertiary-educated parent increases the likelihood that the descendant will complete tertiary education. The advantage of having a highly educated parent in terms of the probability of achieving a university education has become more significant in recent decades.
- Although the education of parents has a strong effect on children’s education in most countries, education is not the only factor; parental wealth and the conditions in childhood are also important, as shown, first, by the impact of upbringing conditions in SHARE and, second, by the impact of wealth transfers (both HFCS and SHARE evidence) on educational attainment.
- The effect of parental wealth on the wealth of descendants is twofold: parental wealth ensures good living conditions, which are fundamental during upbringing, and it provides a buffer for young adults, allowing them to rely on parents for financial support. Consistent differences in wealth between people with different educational levels, and the differences in educational attainment of people dependent or not on the wealth of their parents, provides another perspective for examining the educational divide in the future.
- In several countries, the average gain in wealth owing to inheritance is superior to the gain associated with having a university degree instead of a primary school education.

5 Discussion and policy implications

Ensuring that all European citizens have equal opportunities to develop their talents is a central theme in European policy discussions and is also a key principle of the 2000 EU Charter of Fundamental Rights (European Union, 2012) and the 2017 European Pillar of Social Rights (European Commission, 2017a). Equal opportunities have different dimensions, such as the prohibition of discrimination based on sex, racial or ethnic origin, religion or belief, disability, age or sexual orientation (European Parliament, undated). Economic dimensions of equal opportunities are related to whether there is a level playing field for an equal start in life and for later educational, employment and business opportunities. This report focuses on a particular aspect of the economic determinants of unequal opportunities: wealth concentration and the role of wealth in the transmission of the inequality of opportunities from one generation to another. This closing chapter of the report highlights some key policy issues related to the findings.

Monitoring wealth distribution and consequences of unequal wealth holdings

An obvious yet important area in which progress is needed is in the monitoring of wealth distribution and the composition of wealth across different segments of society. While income inequality issues have received increasing emphasis in recent policy discussions, much less attention has been paid to wealth. As earlier research has established – and this study has added new insights – the distributions of income and wealth can be rather different and thus the groups of wealth-poor and income-poor people do not fully overlap. Eurostat publishes a number of indicators related to income inequality which are regularly updated; regarding wealth inequality, only limited experimental statistics are available on wealth distribution for 2010 and 2015.²⁹

The EU has to date set ambitious poverty reduction targets, reflecting the political consensus on the need to help the poor. However, the main indicator adopted for the poverty targets is a relative measure of poverty, which actually measures income inequality; therefore, new indicators are needed to understand the situation of the income-poor better. This should be augmented with information about wealth-poor people. The

analysis in this report revealed that there is a substantial number of people with negative wealth (4.2% in the 21 HFCS countries). Their situation is most often not related to, for example, a mortgage or wealth acquisition: 80% of negative wealth households are made up of renters without properties. Eurofound has previously drawn attention to managing household over-indebtedness and the role of debt advisory services (Eurofound, 2020); the phenomenon of negative wealth is an extra dimension to consider when assessing the prospects of indebted people with the aim of changing their situation.

Therefore, new and improved indicators on income and wealth are needed for monitoring and making comparisons between Member States. **Improved monitoring of wealth can also support some of the goals of the European Pillar of Social Rights, the EU's inclusive growth agenda, and strengthen the social dimension of the Economic and Monetary Union** along the lines of the June 2013 European Council conclusions.

Beyond monitoring, the implications of unequal wealth holdings should be analysed. Chapter 1 of this report summarised the growing literature on this subject, while Chapter 4 analysed the implications of parental wealth for educational and wealth mobility and reported large heterogeneity across EU Member States. A better understanding of this heterogeneity would help to identify the best policy measures to mitigate the impacts of unequal opportunities arising from different parental wealth levels.

Compulsory wealth declaration

The scarcity and incompleteness of wealth data hinder the monitoring and analysis of wealth distribution and the design of appropriate social policies. For example, the ECB's HFCS suffers from considerable underreporting of assets by households participating in the surveys and the underrepresentation of rich households in such surveys, which is revealed by comparing survey data with the balance sheets of households in national accounts (Vermeulen, 2016). Krenek and Schratzenstaller (2018) conclude that, owing to non-reporting and underreporting, on average 74% of financial assets and 40% of liabilities were missing in the 2014 HFCS compared with national balance sheets as reflected in national accounts.

29 https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=icw_sr_05&lang=en

Since asset values changed little between the second edition (2014) and the third edition (2017) of the HFCS, unfortunately the HFCS probably misses about three-quarters of financial assets, limiting its usefulness. Furthermore, the HFCS is published with a certain delay: the third edition of the ECB's HFCS was based on surveys conducted mostly in 2017, yet the dataset was first made available in spring 2020. It currently includes only 21 EU countries (data for the 22nd country, Spain, is expected to be added later).

Administrative data are surprisingly little used in wealth research. An exception is Hällsten and Pfeffer (2017), who used data from the Swedish wealth register, which existed from 1999 to 2007. The phase-out of wealth taxation resulted in this registry being abolished in 2008. Nonetheless, Hällsten and Pfeffer (2017) combined Swedish wealth register data with data on education, occupation, employment and income via school registers, tax registers, occupation registers and censuses.

One conclusion is therefore that authorities should combine and consolidate available administrative data from various registries at the individual level to obtain information on wealth holdings. Real estate registries allow information to be obtained on domestic real estate holdings, which are a large component of wealth. Registries holding records on, for example, cars, yachts and aeroplanes allow information to be obtained on domestically held vehicles, while data on domestically held financial assets can be collected from financial institutions. Tax declarations require all incomes earned to be declared, from both the home country and abroad, which can be used to estimate wealth holdings. However, estimating asset value from income is difficult, especially when interest rates are close to zero. Non-realised capital gains from financial assets held abroad are typically not reported, nor are real assets held abroad. Cash holdings are hidden from tax authorities. Thus, while the use of available administrative data could go a long way in quantifying individuals' wealth, such data can provide only an incomplete picture.

A wealth declaration is obligatory for people in certain posts or situations in many countries; however, the asset types to be declared may differ between countries (for example, offshore assets may or may not be included), and asset declaration may be required in specific cases only, such as for civil servants or judges. Wealth declaration data can be seen as a means for tracking wealth. Consistency across the Member States could be improved by regularising certain standards for reporting wealth and ensuring that wealth is declared along with the tax declaration. For example, everyone

who files a tax declaration would be obliged to submit a wealth declaration, listing all valuables and all debts beyond a certain threshold, held both in the country of residence and abroad.

There is a precedent for such compulsory wealth declarations: when the net wealth tax was in place in Sweden, highly priced assets, such as cars or valuable collections, were self-reported to the tax authority (Hällsten and Pfeffer, 2017). Tax authorities could reduce the administrative burden on taxpayers related to the preparation of wealth declarations by preparing a preliminary list of assets and liabilities that the authority is aware of, based on various registries. Taxpayers would then have to augment the list with non-registered domestic assets (such as valuables and cash) and assets held abroad. Taxpayers could also indicate their perceived market value for real assets and those financial assets that do not have an easily identified market price.

A compulsory wealth declaration could lead to the following benefits.

- **It would greatly help in monitoring wealth distribution, which in turn could help in the design of social policies;** the anonymised wealth declaration data would enable higher quality research on wealth to be undertaken than what is possible through using survey-based estimates.
- **It could help clamp down on both hidden wealth and hidden income.** While income tax declarations already must include all incomes earned, declaring assets and liabilities would make it more difficult to hide wealth and income.³⁰
- **At the individual level, the efforts needed to keep track of wealth might lead to more conscious financial decisions.**

The main goal of the wealth declaration would be not to impose a tax on net wealth but to achieve the goals listed above. The issue of wealth taxation is returned to in the final section of this chapter.

Promoting financial literacy for greater asset diversification

In addition to the level of wealth, wealth composition is also an important factor in the ability of households to face unexpected adverse income shocks and to support young people in their development. One of the findings of this report was that a large proportion of society keeps financial savings in deposits only. The lack of diversification deprives such people of obtaining a more advantageous return–risk profile for their savings,

³⁰ A comparison of declared income, the change in declared wealth (by also considering valuation changes) and presumptive consumption could reveal inconsistencies. Certainly, individuals who currently hide their wealth might try to hide it even if a wealth declaration is to be made, but at a higher risk of the truth coming out. Undeclared work is also widespread in the EU (European Commission, undated).

limiting wealth accumulation. Among the reasons for this outcome could be limited financial literacy. Unfortunately, little is known about the level of financial literacy in Europe; as Demertzis et al (2020) highlight, Eurostat does not publish indicators on financial literacy.

Assessing and then improving financial literacy could address the complexities of living in financialised economies. A certain level of financial knowledge is necessary for managing household budgets and understanding investment opportunities and credits, which are essential in financialised economies. A higher level of financial literacy could also help specific groups, including people with negative net wealth. Financial illiteracy is also found to be an important determinant of financial fragility (Lusardi and Mitchell, 2014). Helping people to manage their finances and preventing financial fragility can result in improved outcomes both for households and government budgets.

Financial literacy education deserves to be included in the secondary school curriculum, but adult education is equally, if not even more, important. Demertzis et al (2020) suggest implementing financial education programmes in the workplace, which could help employees in managing their everyday finances and also saving for retirement.

Public policies to equalise opportunities

Parental wealth, or a lack of it, can play different roles in promoting educational outcomes with consequences for educational and wealth mobility. The empirical estimates presented in this study confirm that better living conditions during upbringing promote a child's educational achievement, possibly because it promotes cognitive development while eliminating undue stress, which can negatively affect school performance. Wealth provides a cushion for children who can then keep pursuing education and postpone entry into the labour market. If provided with financial gifts throughout life, this possibility is amplified. This study finds that leaving the household at a later age is associated with higher educational outcomes. The analysis also shows that the strength of the link between parental wealth and educational outcomes differs considerably between countries.

Ensuring basic amenities

Ensuring the presence of minimum amenities has been an effective way to improve educational outcomes, and still has relevance in the EU. In Romania, 22.4% of the total population and 24.9% of those under 18 years of age (for whom education is a central issue) do not have a bath, shower or indoor flushing toilet in their household (Table 14). In Lithuania, Latvia and Bulgaria approximately 8% of the population lack these

amenities. In five countries in central Europe, children are more likely to live in such disadvantaged conditions than the overall population. The evidence points to the impact of living conditions in childhood on educational attainment in later life. While the share of such a deprived population in western and northern European countries is rather low, every single person matters and efforts should be made to eliminate such deprivation in every Member State.

Table 14: Proportion of individuals without a bath, shower or indoor flushing toilet in their household residence, 2018 (%)

Country	Percentage of total population	Percentage of those under 18 years
Romania	22.4	24.9
Lithuania	8.7	9.4
Latvia	7.7	5.3
Bulgaria	7.5	10.1
Estonia	3.5	0.8
Hungary	2.7	4.6
Poland	1.6	0.9
Slovakia	1.3	2.0
Croatia	0.8	0.5
Italy	0.5	0.4
Cyprus	0.5	0.1
Portugal	0.5	0.2
Denmark	0.3	0.0
Spain	0.3	0.3
Czechia	0.2	0.2
Greece	0.2	0.3
France	0.2	0.2
Finland	0.2	0.0
Belgium	0.1	0.0
Ireland	0.1	0.0
Luxembourg	0.1	0.0
Austria	0.1	0.0
Slovenia	0.1	0.0
Germany	0.0	0.0
Netherlands	0.0	0.0
Malta	0.0	0.0

Notes: The data for Malta are from 2015. EU-SILC statistics are reported for the year of survey by Eurostat, while the reference period is the previous calendar year for all countries but Ireland. Thus, the values included in this table are reported by Eurostat for the year 2019 but refer to information concerning 2018 (except for Ireland). Data on Sweden are not included in the results published by Eurostat.

Source: EU-SILC, Eurostat online database "Total population having neither a bath, nor a shower, nor indoor flushing toilet in their household" [ilc_mdho05]

Promoting minimum educational attainment

This study found that the association between parental background (education and wealth) and achieving at least basic educational levels – primary school and lower secondary school – was strong across most countries of Europe some decades ago, and that this association was not explained by innate abilities. The results also showed that the probability of achieving basic levels of education has become somewhat less associated with wealth levels in more recent decades. Likewise, it has become less associated with parental education. These findings reflect the impact of education reforms, which are meant to ensure equal access to basic education. Such reforms are indeed important. **Generalised educational reforms are a straightforward way to break the links between wealth and attainment. Their continuation is critical for countries in which completing at least basic educational levels is not universally achieved.**

Access to university

The empirical results suggested that the impact of wealth on educational outcomes varies across countries. Such outcomes are likely to be influenced by public policies, yet policies adopted 30–50 years ago matter for the educational transition of the current older generations, for which it is difficult to obtain data.

The research therefore examined current public policies fostering access to university education; it highlighted the large diversity in such policies across the EU, not least because cross-country variation in public spending on universities was associated with educational outcomes, which was in turn found to be a central aspect of social mobility, as established in the earlier chapters of this report.

There is large diversity in the indicators that can be influenced by public policies. Wealth inequality is an overall outcome indicator that is affected by various policies that influence wealth persistence across generations. Chapter 2 of this report documented that wealth inequality tends to be higher in western European countries than in eastern and southern European countries.

Households' financial contribution to the revenues of tertiary education institutions amounts to about one-half in Australia, Japan, the UK and the USA, reflecting large tuition fees, which can deter young people from poorer backgrounds from pursuing university studies. In the case of the USA, by comparing general tuition subsidies, needs-based student aid, merit-based student aid, and income-contingent loans (ICL), Hanushek et al (2014) find that ICL and needs-based policies were most effective in promoting aggregate efficiency and income equality, while merit-based policies were least effective.

University financing is less dependent on tuition fees in the EU, but there is large variation across countries, ranging from practically free education in a number of western and northern European countries to about 30% in contributions to university revenues in some southern European countries, such as Italy, Portugal and Spain – and also in Ireland, Latvia and Lithuania. University enrolment need not be free for the very rich, but it is crucial to support young people coming from less-advantaged family backgrounds in their university studies. If the conclusions of Hanushek et al (2014) apply to Europe too, needs-based tuition support should be preferred to merit-based support.

The World Economic Forum's (WEF) 'skills' pillar of the Global Competitiveness Index considers indicators related to the current workforce (such as mean years of schooling, staff training, quality of vocational training and skill set of graduates) and to the future workforce (school life expectancy, critical thinking in teaching and the pupil-to-teacher ratio in primary education) and hence this indicator is much broader than just university education. There is a large variation across the EU, with northern and western European countries belonging to the world's best performers, while central, eastern and southern European countries have weaker scores. Public policies to improve the skill set of the population could offer better opportunities for poorer segments of society in finding more rewarding jobs.

There is also a large variety in terms of tertiary educational attainment of the population aged 25–65 years, which in 2002 ranged from close to 10% in Italy, Malta, Portugal, Romania and Slovakia to around 30% in Belgium, Denmark, Estonia and Finland. Partly due to educational reforms, this proportion has increased in the past two decades in all EU countries and now ranges from around 20% in Italy and Romania to around 45% in Cyprus, Finland, Ireland, Luxembourg and Sweden. However, the growth was uneven in countries that had low proportions in 2002: the increase in Italy and Romania was much smaller than in Malta, Portugal and Slovakia, suggesting different effort and success rates across countries.

A particular public policy that could potentially lead to more universal university access is public expenditure on tertiary education. This expenditure (as a proportion of gross national income (GNI)) varies considerably across the EU, from values below 1% of GNI in most central, eastern and southern European countries to about 1.5% or more in most northern and western European countries. Large public debts in southern European countries might limit the fiscal space for public spending, including on university education, yet most central and eastern European countries have rather low public debts and hence fiscal constraints can be less of a reason for low spending. The research found a positive correlation of about 0.5 between public spending on universities and the proportion of the

Table 15: Tertiary educational achievement and certain public policy indicators

Country	Gini coefficient of wealth inequality, 2017	Household financial contribution to tertiary education (% total costs), 2016	WEF skills ranking among 141 countries, 2019	Population aged 25–64 tertiary educational attainment (%), 2002	Population aged 25–64 tertiary educational attainment (%), 2019	Public expenditure on tertiary education (% GNI), 2017
Czechia		10	29	12	24	0.8
Estonia	68	6	15	29	41	1.2
Germany	73		5	22	30	1.2
Luxembourg	68	3	17	19	47	0.7
Slovenia	60	12	26	15	33	1.0
Austria	70	3	16	16	34	1.7
Belgium	65	8	18	28	41	1.4
Sweden		1	7	26	44	1.8
Croatia	62		69	16	25	
Italy	62	30	42	10	20	0.7
Denmark			3	30	40	2.4
Netherlands	78	16	4	25	40	1.6
France	68	11	35	24	38	1.2
Bulgaria			56	21	28	0.6
Cyprus	73		32	29	45	1.2
Finland	66	0	2	32	46	1.7
Greece	61	13	41	18	32	0.6
Hungary	66		49	14	26	0.8
Ireland	70	24	21	25	47	1.2
Latvia	66	30	22	19	36	0.7
Lithuania	61	24	24	22	43	0.8
Malta	62		33	9	29	1.4
Poland	55	16	34	13	32	1.1
Portugal	69	28	43	9	26	0.8
Romania			72	10	18	0.7
Slovakia	55	16	45	11	26	0.8
Spain	68	29	37	25	39	0.9
Non-EU countries						
Australia		47	13			
Japan		53	28			
UK		49	11	30	45	1.5
USA		46	9			

Note: No data available in the case of empty cells.

Sources: Gini coefficient of wealth inequality refers to net household wealth per capita and is based on 2017 HFCS (except for Spain: its preliminary estimate of Gini of net household wealth is sourced from ECB, 2020a); Household financial contribution to tertiary education: OECD dataset, 'Educational expenditure by source and destination'; WEF (World Economic Forum) skills ranking: the WEF; Population aged 25–64 tertiary educational attainment: Eurostat, 'Population aged 25–64 educational attainment level, sex and NUTS 2 regions' dataset [edat_lfse_04]; Public expenditure on tertiary education: Eurostat, 'Public expenditure on education by education level and programme orientation' dataset [educ_uoe_fine08]

population with tertiary educational attainment, suggesting that **more public resources spent on universities indeed increases the chances of poorer people obtaining a university degree. Therefore, such**

public spending fosters social educational mobility, which in turn fosters wealth mobility, as the findings of this report suggest.

One of the channels through which public spending on universities can influence university attendance is tuition fees. The research found a strong negative correlation between public expenditure on tertiary education and the proportion of households involved in university financing (the correlation coefficient was -0.59), suggesting that students have to pay more tuition fees in countries with lower public spending on universities, limiting the opportunities of people coming from poorer families to pursue university studies. The correlation coefficient was -0.71 between public spending on universities and the WEF skills ranking, suggesting that such public spending can positively influence those components of the skills ranking that are related to universities, and perhaps this spending can be a proxy for other educational policies too. **All these results call for public spending on universities and skills development in countries that currently allocate comparatively little for such purposes.**

While this section focuses on achieving a university education, several other social policies can also play important roles in educational and, consequently, wealth mobility, such as early-age education and childcare facilities, the quality of public schooling, opportunities for education especially for children and young people coming from poorer segments of society, and the quality and universality of access to healthcare services. The tax/benefit system and, in particular, the incidence and progressivity of wealth and inheritance taxes can also influence wealth concentration and its impact on social mobility, which is discussed in the final section of this chapter.

Fair housing policies

There are two main channels through which wealth can be gained via homeownership, specifically for those who borrow to buy a home. The first is property values and the second is a strong commitment to save in order to pay the mortgage every month.

The results show that both channels play a role. Even outside property value, the financial savings involved in homeownership are considerable, particularly in a low interest rate environment. Tenants have a lower incidence of financial assets other than deposits and voluntary pensions, showing that, typically, tenants do not opt out of purchasing a home to invest in other types of assets but, instead, cannot purchase a home because they are asset-poor. The research found that renters dedicated a higher percentage of their income to housing expenses, even in relation to households in the same income bracket.

While contracting a mortgage creates a large liability for households, tenants remain more vulnerable to income shocks: renters can exist for fewer months on their deposits alone than homeowners.

Promoting homeownership through mortgages, however, comes with high risks on the liability side of households' balance sheets, particularly if it leads to 'overborrowing' (taking a large loan that the household would not be able to service in the case of a significant income shock, such as unemployment) or if it fuels real estate asset bubbles. Promoting homeownership can also widen wealth gaps. There are two important ways in which a widening of gaps could occur.

- It can favour the middle class over asset- and income-poor households, because, for the latter group, incentives for mortgages may not be enough to transition into homeownership, while the middle class could benefit from such policies. If the stock of owner-occupied housing goes up and the number of rental properties decreases, rental prices can increase, which can further widen the gap between renters and mortgage holders.
- If a house price bubble is created by homeownership-promoting policies, then new homeowners might buy at prices that are above house fundamentals. When the house price bubble bursts, the wealth of mortgage holders declines.

On the first point, Dewilde and De Decker (2016) show that, in the period 1995–2012, countries with increasing mortgage debt (and a concurrent reduction in private rental supply) experienced widening housing affordability gaps between low-income and middle-income households. Ireland, Portugal and Spain are countries where both these movements were particularly visible.

On the second point, wealth erosion has been observed in the Netherlands, where many households have negative wealth as a result of higher mortgage liabilities than property value, as well as in Ireland in 2014, where a large proportion of negative wealth households can be explained by falling housing prices. Similarly, in the financial crisis in the USA, overexposure to housing assets through mortgage debt resulted in a widening gap between younger and older people, which Emmons and Noeth (2013) attribute to economical vulnerability and low financial knowledge.

The existence of social housing and subsidised housing, in and of itself, is not enough to decrease wealth inequality or bring effort rates down. Some of the countries with the highest proportions of social and subsidised housing, such as the Netherlands, have renters dedicating very high percentages of their income to renting, while the country is characterised by very high levels of wealth inequality. The Netherlands, however, has a very tight housing supply. Austria and Germany, which have heavily regulated rental markets but comparatively more dwellings, have the lowest rent effort rates of western Europe, although wealth inequality is also high in these countries.

In Germany, high wealth inequality also persists alongside widespread renting and extensive social housing. Kaas et al (2020) attribute this result to housing policies that produce incentives to rent, such as high transfer taxes on buying real estate, no mortgage interest tax deductions for owner-occupiers and a social housing sector with broad eligibility requirements. They conclude that a reduction of transaction taxes, the introduction of mortgage interest tax deductions for owner-occupiers, the elimination of social housing and the introduction of an additional monetary housing subsidy for low-income households could increase the homeownership rate, reduce wealth inequality and increase overall welfare.

On the plus side, affordability for renters is better in Germany than in most other western European countries. Moreover, Germany did not experience a boom and bust in housing prices before and after the financial crisis, unlike Ireland and Spain. The relatively flat housing market in Germany is attributed to prudential lending and the prevalence of the rental market itself (Voigtländer, 2014).

Wealth inequality and housing models

In trying to make owner-occupier housing widespread through mortgages, asset-poor individuals are excluded. The countries that have, in tandem, high homeownership and low wealth inequality, such as Lithuania, arrived at such a point not through mortgage-backed ownership and homeownership incentives but because individuals in social housing ultimately became owners of their properties, mostly at symbolic prices. In this process, there was no distinction between asset holdings – unlike mortgage backing, which, by construction, excludes the poorest.

Another important point is that rent receivers themselves are at the top of the wealth distribution. As a result, some of the poorest households in society (particularly in countries without large rental markets, where tenants are some of the poorest individuals) regularly make transfers to some of the wealthiest households, increasing wealth inequality.

From a policy standpoint, there is room for social/public housing designed in a way that would reduce the effort rates of tenants, allowing them to build up their savings by, for instance, linking rents paid to incomes earned. Decreasing effort rates through public housing would result in financial savings, increasing the cushion for tenants and facilitating the transition into homeownership. Goffette-Nagot and Sidibé (2016) show that residing in social housing can facilitate the accumulation of savings which can then be used as a down payment for a property purchase.

Social housing policies can have a ‘right to buy’ clause, which has the advantage of facilitating the transition of households into homeownership substantially, as payments can be deducted from the purchase price.

However, for such a policy to be effective, there must be renewed housing stock available for housing. These policies are, perhaps, more difficult to manage in the long term than schemes without a buying option. Housing Europe (2019) highlights the difficulties in unlocking housing development, namely reusing existing land. It also shows that public financing has moved from directly subsidising public housing development to providing allowances to households. In the same vein, Whitehead and Scanlon (2007) argue that, overall in Europe, social housing has come to rely more on public–private partnerships over the years.

An effect of homeownership on wealth exists, but it is also important to note the relationship between homeownership and public policies that promote homeownership. **While there is an ‘equalising’ effect of homeownership, the policies that promote homeownership create added advantages for homeowners, which widen the wealth gap between tenants and homeowners.** In Austria and Germany, where rents are affordable, disregarding housing liabilities and assets does not lead to differences in the Gini index of wealth inequality that are as large as in other countries. Wind and Dewilde (2019) show that, for these two countries, the effect of homeownership on wealth is substantially smaller than in other EU countries.

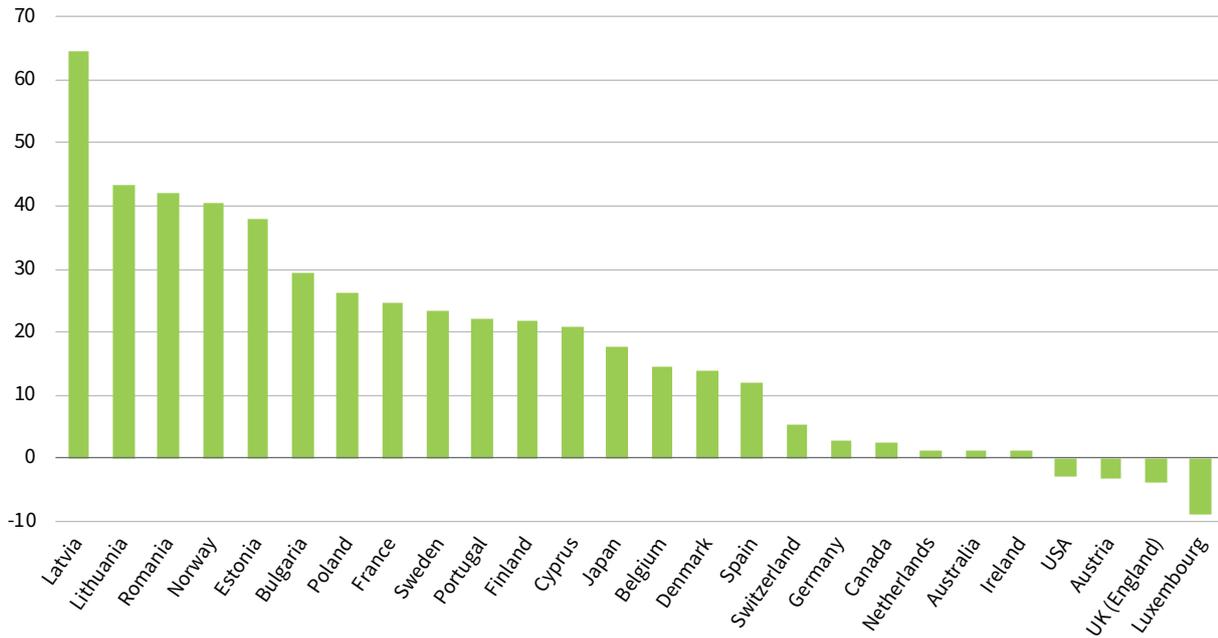
However, the labour market is not static and neither is the housing market. Privileging owner-occupier housing harms labour flexibility, curbing economic output. Healthy rental markets can exist but, for them to function, there must be both sufficient supply and regulation. To facilitate labour movements, a rental market is necessary.

Housing affordability has become an issue in recent years in German cities. Wijburg and Aalbers (2017) highlight that housing wealth inequality in the country has a large regional component, with demographic movements and economic growth favouring cities to the detriment of rural areas. Lutz (2020) finds that the current housing affordability crisis in Germany is a problem of intergenerational injustice, as it affects young Germans disproportionately negatively.

Supply expansion

Regardless of countries’ housing markets, housing affordability issues build up as demand for housing rises, particularly in cities. Any housing policy in high-pressure areas cannot avoid considering strategic reorganisation of the territory. Expanding supply directly is a first step. In the case of the Netherlands, for instance, there is very tight supply and few vacant dwellings, and this balance has hardly changed over the last decade (Figure 49). The number of dwellings per 1,000 inhabitants has even declined in Luxembourg (partly related to high immigration rates). In such a situation, there is no other solution than to construct more housing, thus alleviating restrictions. A way to

Figure 49: Change in the number of dwellings per 1,000 inhabitants from 2010 to 2018, OECD countries

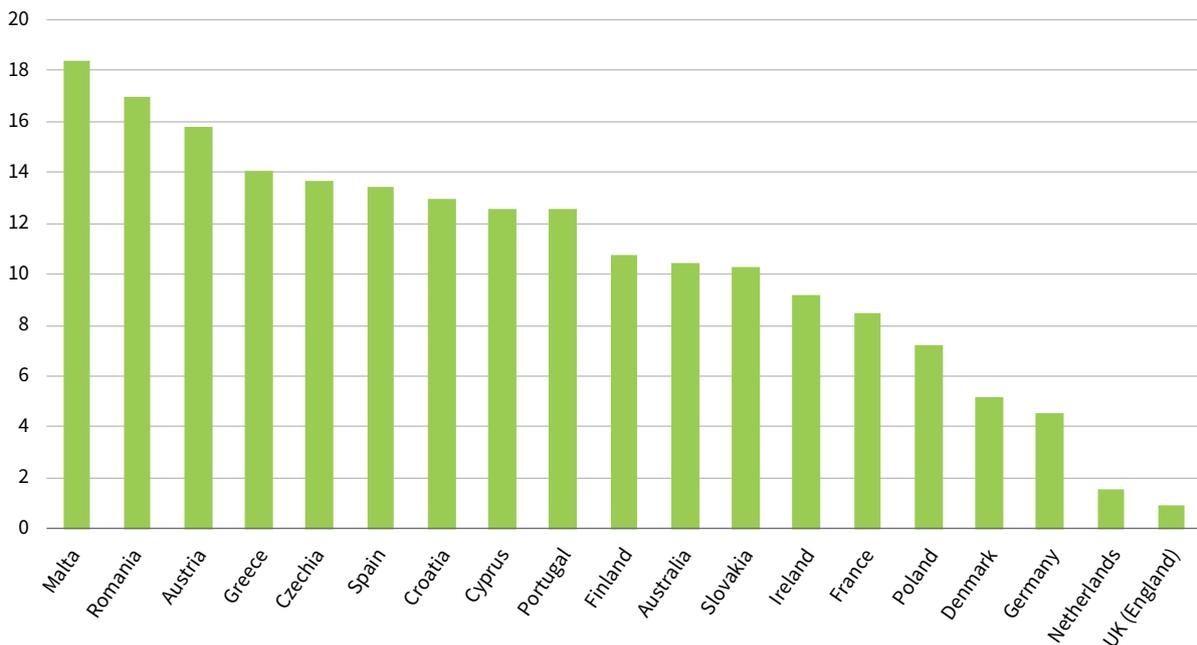


Source: OECD questionnaire on affordable and social housing (2016, 2019)

expand supply is to allow housing to be built more densely and taller, as suggested by Lutz (2020). The Economist (2020) argues that there is pressure from existing homeowners on politicians not to ease building restrictions to protect the value of their existing investment. If existing homeowners have a huge lobby power, the simple solution would be to resist this lobby and allow for the construction of more buildings.

Other countries, however, have large proportions of vacant dwellings (Figure 50), which can be directly targeted through specific policies. While these houses might, in some cases, be vacation homes, there are also ‘unusable’ buildings without renovation plans and also obviously unused buildings. In France, a relatively coercive policy of taxing vacant properties yielded

Figure 50: Proportion of vacant dwellings, 2018 or latest year available (%)



Source: OECD questionnaire on affordable and social housing (2016, 2019), 2018 or latest year available

positive results, reducing the number of vacant dwellings (Segú and Vignolles, 2018).

Other fundamental policies that can be effective in reducing rental prices and taming price climbs are based on the strategic reorganisation of cities.

Specifically, investment into public transport and ambitious reorganisation plans for cities to alleviate traffic result in lower commuting times and more ‘effective’ housing supply for individuals working in urban centres.

Another issue for highly touristic cities is the attractiveness of touristic rental vis-à-vis long-term rentals. Franco et al (2019) show that Airbnb short-term rentals have led to price increases in Lisbon and Porto, Portugal. Other studies point to similar trends. It is true that touristic rental can be a driving force for renovating and restoring properties; however, alternative mechanisms can be created. Tax deductions for renovating and maintaining properties that are being rented out are an option. Property taxation based on house value disincentivises renovation in the absence of compensating mechanisms. Apart from investment and savings considerations, housing conditions are better for homeowners, which increases the educational outcomes of children, both in line with the results of this study and as reflected in the literature. It is thus important to ensure good conditions in rented housing, in which tax deductions can help. The stability associated with homeownership might also be associated with improved educational outcomes of offspring. Incentives favouring longer term rentals, however, might be of little use in the presence of volatile housing markets and labour market changes, creating risks for both landlords and tenants.

While restrictions to short-term rentals tame rent price climbs, they might have negative economic consequences overall. They should, nonetheless, be considered, particularly if there are no further construction/renovation possibilities. If alternative accommodation exists, one option is to create a distributional mechanism, through which tax revenues from tourism accommodation revert to housing allowances for poorer tenants – or, if a public housing sector exists, are used for its expansion.

More ambitious transformations should be considered for countries with a clear urban–rural divide. The creation of incentives for the digitalisation of companies and for teleworking can allow for the decentralisation of economic activities, reducing demand for overcrowded city centres. While the possibility of teleworking is currently very skewed towards the most qualified, ultimately, if demographic movements lead to large movements away from cities, in-person job opportunities will ultimately follow.

Recently, because of the coronavirus disease 2019 (COVID-19) pandemic, rent prices seem to be falling in a

number of cities. Likewise, pressures from tourism are (at least temporarily) absent. Long-term renting is likely to take priority over short-term, with the potential to increase affordability and stability for cities.

Asset diversification

Middle-income households rarely have assets beyond deposits, pensions funds and real estate. A lack of financial knowledge is an issue that leads middle-income households to use housing as an investment, which, if bought overvalued, might have negative consequences for them in the long run. Moreover, using real estate purely as an investment vehicle can lead to vacant dwellings, further decreasing private rental supply.

To curb such behaviour, tax benefits should primarily benefit first properties and properties that are rented out permanently. Moreover, financial knowledge ought to be promoted and financial transparency regulations passed, in order to present individuals with alternative investments that might also have higher returns for society overall.

Wealth taxation

There has recently been a renewed interest in wealth taxation. A report by the European Commission (2015), for example, argues for the introduction of net wealth taxes and coordination of such taxes at the European level within the European Semester framework to allow for the efficient and equitable taxation of wealth. It recommends giving special treatment to owner-occupied housing, given its role in mitigating wealth inequality. In particular, in order to put homeowners and renters on an equal footing, imputed net income from housing could be taxed in line with income from other investment, while additional owner-occupied housing taxes should be levied on more affluent households only.

Saez and Zucman (2020) make the case for a wealth tax, while Landais et al (2020) propose that a time-limited (for example, for 10 years) European-wide progressive wealth tax be created to finance the public costs of the COVID-19 response. Landais et al argue for a progressive tax and only for the top 1% of wealth holders, because the poor have been disproportionately hit by the economic fallout from the pandemic, while most of the rich were able to work from home and have large savings to buffer shocks. The tax rate would be 1% on net wealth between €2 million and €8 million, 2% on net wealth between €8 million and €1 billion, and 3% on net wealth over €1 billion. According to their calculations, this would generate 1.05% of GDP in additional revenue each year. They argue that the impact of this temporary wealth tax on economic growth would not be harmful, because it would tax past accumulation, and that the returns on current investment and innovation would be unaffected owing to the time-limited nature of the tax.

While the OECD (2018) claims that there is a strong case for addressing wealth inequality through the tax system, its overall conclusion was that a wealth tax is not the most effective way to do this. Instead, broad-based personal capital income taxes and well-designed inheritance and gift taxes could achieve the goal more effectively, because net wealth taxes tend to be more distortive and less equitable, largely because they are imposed irrespective of the actual returns that taxpayers earn on their assets. However, in the absence of broad-based personal capital income taxes and taxes on wealth transfers, a net wealth tax could be used as an imperfect substitute (OECD, 2018)

While the arguments in favour of net wealth taxation are reasonable, including proposals for its progressivity, this study is only indirectly related to wealth taxation. This study showed that there are very high levels of wealth concentration, that parental wealth matters for education – which, in turn, helps the descendants of rich people to build greater wealth – and that, in general, there is wealth persistence across generations, while the disadvantages coming from lower wealth are also persistent. In particular, a great proportion of the advantages of parental wealth are already in place before inheritance occurs, and not in the form of financial transfers, for the following reasons.

- As shown in the report, the high wealth of parents substantially increases the expected educational achievement of children, controlling for innate abilities. Children of wealthier parents are more likely to have educational achievements above the average of their country. Financial gifts are, in most countries, not relevant for educational achievement after controlling for parental wealth levels.
- As shown, children of wealthier parents are more likely to stay longer in the parental household.
- Individuals who stand to receive a substantial inheritance are already significantly wealthier than those who will not while their parents are alive.

These findings call for public policies to support those who cannot benefit from parental wealth. Naturally, a wealth tax, and in particular a progressive wealth tax, could redistribute from the rich to the poor (possibly in the form of improved public services such as public education, healthcare and social housing) and thereby could help to boost the opportunities of poorer segments of society.

The research did find that the current tax system might not be as progressive as intended, which makes it difficult to simply work within its framework.

‘Incorporating’, namely individuals transforming into companies to benefit from lower tax rates and deductions (a risk identified by Saez and Zucman, 2020), might be jeopardising progressivity currently: individuals, and particularly professionals, in the top wealth brackets are substantially more likely to be self-employed without employees. Within the current framework, higher corporate tax rates for companies without employees could partly address the issue, yet they might overburden the establishment and running of ‘legitimate’ companies that are not practising any form of tax avoidance.

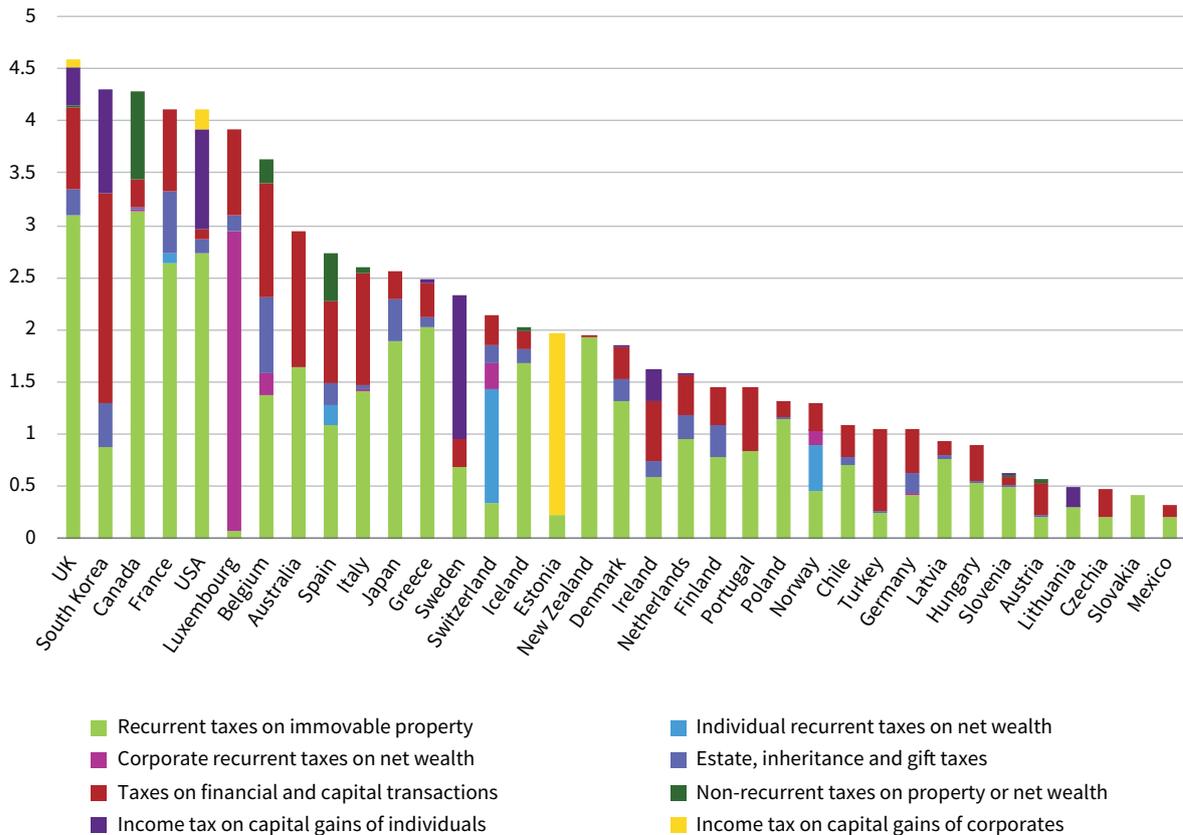
While the authors of this report agree that increasing progressivity is necessary, this study does not allow a conclusion to be drawn on, for instance, whether a higher corporate income tax or a net wealth tax would be preferable to achieve this goal. This study does not have direct implications for which form of taxation would be the most desirable from efficiency, equity and implementation perspectives, not least because that also depends on the overall tax system, public services, social protection systems and other social circumstances.

In this context, attention is drawn to the large diversity of wealth-type taxation across European countries (European Commission, 2014). Wealth-related tax revenues range from a mere 0.4% of GDP in Slovakia to 4.1% of GDP in France among the EU OECD countries, while such tax revenues are even higher (as a proportion of GDP) in the UK (4.6%), South Korea and Canada (both 4.3%) (Figure 51). Not just the level but the composition of wealth-related taxes varies across countries. Recurrent taxes on immovable property dominate such taxes in most countries, but there are three European countries with another dominant wealth-type tax: net wealth tax on corporate wealth in Luxembourg, income tax on capital gains of individuals in Sweden and income tax on capital gains of companies in Estonia.

Net wealth tax on individuals exists only in two EU OECD countries, France and Spain, in addition to two non-EU OECD countries, Norway and Switzerland. There were eight OECD countries that repealed individuals’ net wealth taxes in the 1990s and 2000s: Austria (in 1994), Denmark (1997), Germany (1997), Netherlands (2001), Finland (2006), Iceland (2006), Luxembourg (2006) and Sweden (2007). Revenues from individuals’ net wealth taxes in 2018 amounted to 0.08% of GDP in France, 0.18% of GDP in Spain, 0.45% of GDP in Norway and 1.08% of GDP in Switzerland and hence accounted for a rather small portion of overall wealth-related taxes (Figure 51).³¹

31 In 2018, there were seven OECD countries that levied taxes on corporate net wealth: Canada (0.02% of GDP), Germany (0.12%), Norway (0.12%), Italy (0.13%), Belgium (0.21%), Switzerland (0.25%) and Luxembourg (2.87%).

Figure 51: Wealth-related tax revenues, OECD countries, 2018 (% of GDP)



Notes: Data for Australia, Greece and Mexico are from 2017. For Chile, Mexico, Poland and Portugal, the dataset does not include information on whether income tax on capital gains of individuals exists or not. For Chile, Hungary, Mexico, Poland, Portugal, Slovakia and Spain, the dataset does not include information on whether income tax on capital gains of corporates exists or not. Recurrent taxes are defined as those levied at regular intervals (usually annually) and non-recurrent taxes are levied just once.

Source: OECD dataset, 'Revenue statistics'

Taxation is a national responsibility in the EU and it is difficult to find a consensus on pan-European tax issues, as the so-far derailed recent attempts to introduce a common consolidated corporate tax base (European Parliament, 2015) and a financial transaction tax (European Parliament, 2020) highlight. It is therefore difficult to foresee a realistic prospect for an EU-wide harmonised net wealth tax or any other wealth type tax. Nonetheless, **the European Commission could play a coordinating role in the monitoring and analysis of the national tax systems in EU Member States with a view to providing recommendations in the context of the European Semester** for countries that apply very low wealth-related taxes, as well as limiting undue wealth and profit shifting to jurisdictions with low effective tax rates.

Last but not least, **the increased efforts to combat tax evasion should be continued, because estimates suggest that a large proportion of household wealth and income is hidden** (European Commission 2019c), which is a major problem from a justice perspective. The rich can move wealth to low-tax jurisdictions and engineer complex financial networks with the aim of hiding wealth and limiting tax obligations. Fighting tax evasion and limiting the scope for tax avoidance require a coordinated European approach, also in partnership with non-EU countries. **A compulsory wealth declaration along with current income tax declarations could also help limit hidden wealth and income.**

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Annex: Information on data sources

Household Finance and Consumption Survey (HFCS)

Survey design

The HFCS is a survey of private households. It was coordinated by the ECB and carried out at a national level in 2010, 2014 and 2017 (ECB, undated). The specific periods of fieldwork in each of the three editions slightly deviate from the years mentioned; however, for ease of referencing the period to which the data relate, the year during which data collection in most countries took place is used.

The sample sizes below refer to the numbers of surveyed households, which also correspond to the numbers of household reference people for whom data such as age, education and employment status were available at the individual level; these data were

analysed in this study. The sample of all individuals from the private households surveyed in the 2017 HFCS was also used; this is stated, where applicable, in the notes under the figures and tables in this report. The HFCS data were weighted to make them representative in relation to the universe of private households in a given country or in the aggregation of countries, where relevant.

Country coverage in this report

- Fourteen countries that were surveyed in all three editions of the HFCS.
- Twenty-one countries (including 18 euro zone members) from the 2017 HFCS.
- Three countries with data on parents' education (Italy, Luxembourg and Portugal).

More information is available at ECB (2020b).

Overview of HFCS net sample sizes

Country	Edition 1	Edition 2	Edition 3	
	Households	Households	Households	Individuals
Austria	2,380	2,997	3,072	6,414
Belgium	2,364	2,238	2,329	5,370
Croatia (since edition 3)			1,357	3,699
Cyprus	1,237	1,289	1,303	4,188
Estonia (since edition 2)		2,220	2,679	6,724
Finland	10,989	11,030	10,210	24,818
France	15,006	12,035	13,685	32,799
Germany	3,565	4,461	4,942	11,251
Greece	2,971	3,003	3,007	7,463
Hungary (since edition 2)		6,207	5,968	13,937
Ireland (since edition 2)		5,419	4,793	12,778
Italy	7,951	8,156	7,420	16,462
Latvia (since edition 2)		1,202	1,249	2,824
Lithuania (since edition 3)			1,664	3,729
Luxembourg	950	1,601	1,616	4,384
Malta	843	999	1,004	2,632
Netherlands	1,301	1,284	2,556	5,250
Poland (since edition 2)		3,483	5,858	15,017
Portugal	4,404	6,207	5,924	15,079
Slovakia	2,057	2,136	2,179	5,307
Slovenia	343	2,553	2,014	5,405
Spain*	6,197	6,106	6,413	NA
Total	62,558	84,626	91,242	205,530

Notes: In France and Portugal, survey participation was compulsory for households. *At the time of writing, data for Spain were not available.
Source: HFCS 2010, 2014, 2017

Survey of Health, Ageing and Retirement in Europe (SHARE)

Survey design

SHARE targets individuals and their partners aged 50 years and older. Many of the households involved in SHARE had all their members surveyed: across the editions of SHARE, at least 71% of respondents lived in households with either one or two individuals.³²

Country coverage in this report

Thirteen Member States, which included at least 500 respondents with data on their parents' education from the first to seventh editions (2004–2017): Austria, Belgium, Croatia, Czechia, Denmark, Estonia, France, Germany, Italy, Luxembourg, the Netherlands, Slovenia

and Sweden. Spain was also included in some examples.

Luxembourg Wealth Study (LWS)

The LWS database contains data from various national sources and includes household- and individual-level information (LIS Data Center, undated). The estimates used in this study were from 1995 to 2017.

Country coverage in this report

Ten Member States – Austria, Finland, Germany, Greece, Italy, Luxembourg, Slovakia, Slovenia, Spain (covered by the HFCS) and Sweden – as well as six non-EU countries: Australia, Canada, Norway, South Africa, the UK and the USA.

32 More information on SHARE is available at <http://www.share-project.org/home0.html>

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The EU Open Data Portal (<http://data.europa.eu/euodp>) provides access to datasets from the EU. Data can be downloaded and reused for free, both for commercial and non-commercial purposes.

This report explores the distribution of household wealth in the EU Member States and analyses the role of wealth in social mobility. Using data from three datasets (the Household Finance and Consumption Survey, the Survey of Health, Ageing and Retirement in Europe and the Luxembourg Wealth Study), it focuses on wealth per household member. Wealth composition is compared across social groups and countries, and the role of housing assets in wealth distribution and negative wealth is assessed. The findings show that parental background, including parental wealth, has an impact on educational and wealth mobility. In order to promote equality of opportunities in terms of access to education and housing, the impact of wealth inequalities, including differences in parental wealth, should be counterbalanced. The report also suggests that regularising wealth declaration in the EU could be a way of promoting social justice by minimising hidden wealth and combating tax evasion.

The European Foundation for the Improvement of Living and Working Conditions (Eurofound) is a tripartite European Union Agency established in 1975. Its role is to provide knowledge in the area of social, employment and work-related policies according to Regulation (EU) 2019/127.

