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# Household wealth inequality across OECD countries: new OECD evidence

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The evidence of higher income inequalities in most OECD countries has recently attracted much attention from both policy-makers and the media – as witnessed by the debate that followed the publication of Thomas Piketty's book *Capital in the 21st Century* (2014) and by the very large number of studies on changes in income inequality. There is, however, much less evidence on inequality in the distribution of household wealth, both within and between countries. In fact, even today, no international standards exist that National Statistics Offices and other data producers could use when gathering data on wealth distribution. This situation is, however, rapidly changing. In 2013, the OECD issued a set of 'Guidelines' for micro statistics on household wealth (OECD, 2013) and an increasing number of countries have engaged in the collection of micro statistics in this field (European Central Bank, 2013). Building on these initiatives as well as others, such as the *Luxembourg Wealth Study* (Sierminska et al, 2006) which have informed previous OECD analysis (Jantii et al., 2008), the OECD has now collected a new set of data on the distribution of household wealth for 18 OECD countries, based on the set of conventions and classifications proposed in the *2013 OECD Guidelines*. This Statistics Brief presents this new *OECD Wealth Distribution Database* released on 15 June 2015, and provides some empirical results drawing on more extensive analysis in Murtin et al. (2015). Preliminary results were presented in *In It Together: Why Less Inequality Benefits All* (2015).

Evidence from this database for 18 OECD countries highlights large differences in wealth holdings across OECD countries. Moreover, wealth inequality is much larger than income inequality due to financial assets that are very unequally distributed and mainly accrue to top income and top wealth households. Over the long run, the increase in the price of shares and housing relative to consumer goods has been one of the main drivers of higher household wealth, while the real appreciation of shares prices has also increased wealth concentration. This trend was not reversed by the financial crisis in the United States, the Netherlands and the United Kingdom where wealth inequality at the top of the distribution has grown markedly, while smaller changes have been observed in Australia, Canada and Italy. Human capital is also correlated with higher wealth as well as higher incomes and earnings: households headed by a college graduate have a net wealth that, on average, is significantly higher than households whose head has an upper

## Box 1: A new set of OECD statistics on the distribution of household wealth

The data in the OECD Wealth Distribution Database are based on national sources. A subset of the information collected is available to users in the OECD dissemination platform (http://stats.oecd.org/index.aspx?datasetcode=Wealth). Estimates referring to the most recent year (generally 2010) are currently available for 18 OECD countries, while estimates referring to more than one year are available for six. Countries included are Australia, Austria, Belgium, Canada, Finland, France, Germany, Greece, Italy, Korea, Luxembourg, the Netherlands (based on two different sources), Norway, Portugal, the Slovak Republic, Spain, the United Kingdom (limited to Great Britain) and the United States. For seven countries, estimates were obtained through a questionnaire completed by national contact points in national statistics offices and other producers of official statistics (e.g. central banks) that regularly collect micro-level information on household wealth; among them, estimates for Australia, Canada, Korea, the United Kingdom and the United States are based on household surveys, while those for the Netherlands and Norway are based on tax and administrative records. For 11 countries (participants in the *Euro-System Household Finance and Consumption Survey*), estimates for the most recent year were computed by the OECD based on the public use file provided by the European Central Bank (complemented, in the case of France and Italy, by estimates for earlier years provided by national contact points). The data in the *OECD Wealth Distribution Database* share the following characteristics:

- They refer to the distribution of real and financial assets and liabilities across households (rather than across persons or adults), with no adjustment made to reflect differences in household size (which is the convention used by the OECD when analysing the distribution of household income). The data also refer to the assets and liabilities held by *private* households resident in the country.

- Assets and liabilities are classified based on the nomenclature proposed by the *OECD Guidelines*. This nomenclature distinguishes between five categories of non-financial assets, eight categories of financial assets, and three categories of financial liabilities. Among financial assets, assets held in the form of "pension schemes related to employment" are reported as a separate category (the data shown below refer to a narrower definition of household wealth that excludes these assets from the total).

- Information is collected on net household wealth broken down by housing status (three groups), age of the household head (six groups), number of household members (five groups), household type (six groups), education of the household head (four groups), main source of income (five groups), and wealth and income quintiles (with additional breakdowns for the top 10%, 5% and 1% of the distribution). Information is also collected on the share of households holding various types of assets and liabilities; on the mean value of assets and liabilities for households holding them; on the joint distribution of household wealth and income across household quintiles; and on the extent of over-indebtedness across households based on two measures of over-indebtedness (debt-to-asset ratio above 75%; and a debt-to-income ratio exceeding 3).

Despite efforts to ensure common treatments and classifications across countries, the measures included in the *OECD Wealth Distribution Database* are affected by differences that limit their comparability. Two of the most important are: i) differences between countries in the year the data was collected (ranging between 2010 and 2013, for the most recent observation); ii) differences in the degree of oversampling of rich households across countries. With respect to the latter, differences (ranging between no oversampling for Australia, to large oversampling for the United States and Spain) may affect international comparisons of both levels and concentrations of household wealth as, in all countries, most wealth is typically held by the richest households.

secondary education and more than three times higher than those with only a primary education. Over-indebtedness affects mostly households with a young head, while both prevalence and depth of debt are particularly high in the United States, the Netherlands and Norway.

## Household wealth: key concepts and guidance for measurement

The concept of wealth used in the *OECD Guidelines* refers to 'ownership of economic capital' as a dimension of people's material well-being (alongside income and consumption); hence it excludes other types of capital (such as human capital, social capital and collectively held assets) that, while important for individuals and communities, are not material assets over which people can exercise ownership rights. Similarly, the concept of households used in the *Guidelines* is in line with that recommended in the *Canberra Group Handbook on Household Income Statistics* (UN, 2011); it refers to all private households who reside in housing units and are resident of the country to which statistics relates; hence it excludes non-profit institutions serving households as well as those unincorporated enterprises that, depending on country practices, are sometimes included in National Accounts data for the household sector.

Thus, the OECD Guidelines:

» are based on a conceptual framework linking wealth stocks at the beginning and end of the accounting period. In this framework, changes in wealth arise from savings and dissavings, holding gains or losses, inheritances and bequests and inter vivos transfers. This framework allows articulating the relationship between micro statistics on household wealth and those on household income and consumption.

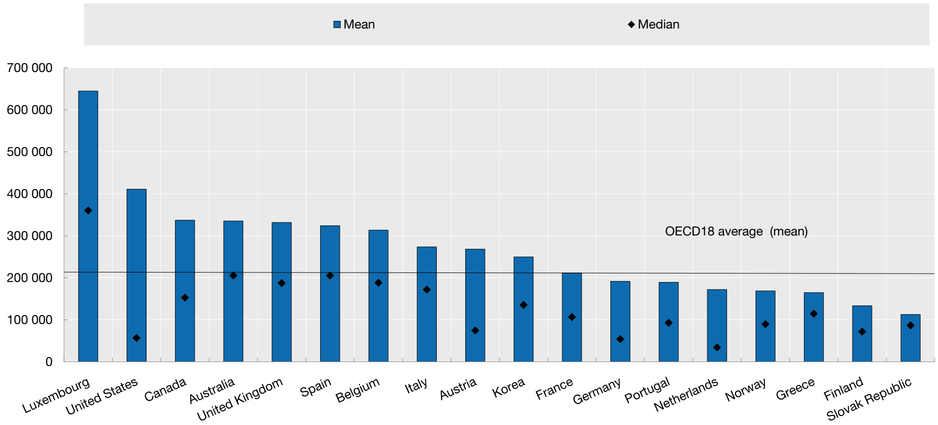
» recommend a classification for financial assets, non-financial assets and liabilities. While, in most cases, this classification follows closely the one used in the System of National Accounts, the Guidelines depart from it in some cases in order to better support distributional analysis (e.g. they include consumer durables among assets, as these are particularly important for poorer households; they include net equity in own unincorporated business among financial assets, as households may not be able to distinguish them from shares in corporations)

These *Guidelines* were prepared by the OECD and a team of national statisticians and experts, and informed by the results of an inventory of measurement initiatives in this field. The *OECD Wealth Distribution Database* (Box 1) follows the conventions and definitions recommended in these *Guidelines*.

## Levels of household wealth across countries

Figure 1 shows levels of household wealth. The highest mean levels of wealth are observed in Luxembourg, the United States, Canada, Australia, the United Kingdom and Spain, while the Slovak Republic, Finland, Greece, Norway and the Netherlands record the lowest levels. The net wealth of the median household is less affected by potentially inaccurate measurements of wealth at the top of the distribution. Shifting from mean to median net wealth leads to large differences in country ranking for the United States, Austria and Germany, suggesting higher wealth inequality in these countries. Household wealth can also be expressed as a share of household income, which intuitively corresponds to the number of years a household could maintain its living standard in the future by drawing down its accumulated wealth. Based on this measure, the stock of net wealth varies between three and nine times the value of household income[1]; wealth-to-income rations are comparatively low in Norway, Finland, the Netherlands and Germany, but higher in Spain, Luxembourg, Italy, Portugal and the United Kingdom.

Figure 1. **Mean and median net wealth per household in selected OECD countries**
2010 or latest available year, values in 2005 USD PPPs




Note: Countries are ranked from left to right, in decreasing order of mean household wealth. Wealth values are ranked in 2005 USD: first, wealth values in different years are expressed in prices of the same year (2005) though consumer prices indexes; second, national values are converted into a common currency through the use of purchasing power parities for household consumption.
Source: OECD Wealth Distribution Database.

Assets prices (relative to the consumer price index) and household savings rates are among the factors that may have influenced the level of household wealth in the long run. Among these potential drivers, housing prices appear to be the most important one, as there is a strong positive correlation between median net wealth of households and the annual real growth rate of house prices over a period spanning about 30 years. Conversely, no significant correlation exists between the real growth of financial asset prices, the national or household savings rate, and median wealth. Regarding financial asset prices, the absence of correlation with the overall level of wealth likely reflects the high concentration of this type of assets among a small fraction of households.

## How does wealth inequality compare across countries?

In all OECD countries, the wealth distribution is much more concentrated than the income distribution. On average, the top 10% (of households) accounts for about 50% of total household wealth, while the top 10% (of individuals) accounts for about 25% of total household income. On average, the wealth share of the top *centile* in the wealth distribution is almost as large as the income share of the top decile of the income distribution.

Conventional measures of inequality such as the Gini coefficient are not well suited to describe the distribution of household wealth, due to the large fraction of households with zero or negative wealth. A more convenient, albeit partial, measure of wealth inequality is the ratio between mean and median net wealth: mean net wealth is 2.5 times larger than median net wealth across the 18 OECD countries covered in the *OECD Wealth Distribution Database*, ranging between more than 7 times in the United States, around 5 times in the Netherlands, 4 times in Germany and Austria, and close to twice in most other OECD countries. This compares to values of around 1.2 times in the case of household income for most OECD countries.

A different measure of wealth inequality is the share of household wealth held by the top percentiles in the distribution. On average, across the countries shown in Figure 2, the top 10%, 5% and 1% wealthiest households own 50%, 37% and 18% of total household wealth, respectively, while the bottom 60% of the distribution owns only 13% of total household wealth. Based on these measures, wealth is the most concentrated in the United States, Austria, the Netherlands and Germany.

Wealth and income inequality are typically jointly determined and interact with each other. Data on the joint distribution of income and wealth show that households in the bottom quintile of the wealth distribution in the United States are 5 times more numerous at the bottom of the income distribution than at the top. Conversely, households in the top quintile of the wealth distribution are 10 times more numerous in the top of the income distribution than at the bottom. The same pattern holds for all OECD countries, i.e. low-wealth households are typically low-income households while high-wealth households are typically also high-income households. The correlation between income and wealth at the top end of the distribution is largest in Canada, Germany and Luxembourg, while at the bottom end it is largest in Canada, France, Italy and the United States. The United Kingdom, the Netherlands and Australia show a smaller correlation between income and wealth for both poor and rich households.

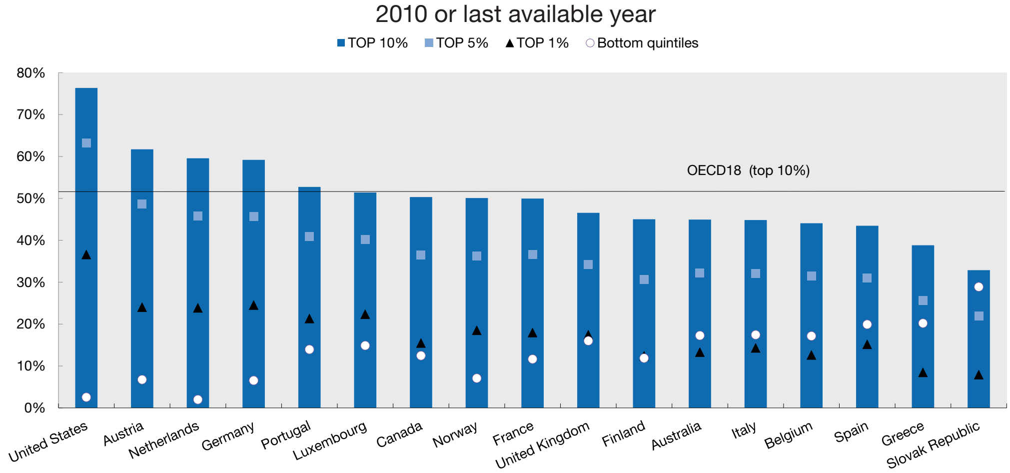
Ownership of financial assets features prominently among the factors that influence wealth inequality. Financial assets are much more concentrated than non-financial ones: it follows that higher prices of financial assets are associated with a larger share of wealth going to the top 10%. Figure 3 decomposes the net wealth of households by types of assets for each quintile and for the top percentiles of the distribution. On average, households in the top quintile have a mean value of financial wealth that is more than 70 times the value of those in the first quintile, as compared to 30 times for non-financial assets. Total liabilities also increase along the wealth distribution, but they are only twice as large for the top quintile compared with the bottom one. Differences in mean real assets across quintiles are small in Norway and the Netherlands but very large in Canada, France and Belgium.

## Demographic characteristics of indebted and over-indebted households

The concentration of liabilities in some types of households is very important for the stability of the financial system. The *OECD Wealth Distribution Database* provides information on the age characteristics of household holding any type of debt (distinguishing between mortages and other loans such as consumer loans and the balance due on credit cards) and of over-indebted households, measured in terms of households whose total liabilities are more than 3 times their income. The share of households holding debt is similar for young (age 16-34) and prime-age adults (35-44 and 45-54), while being smaller among households headed by a person above 65. In contrast, over-indebtedness falls disproportionately upon young people: on average 40% of over-indebted households are

Figure 2. **Wealth shares of top percentiles of the net wealth distribution in selected OECD countries**

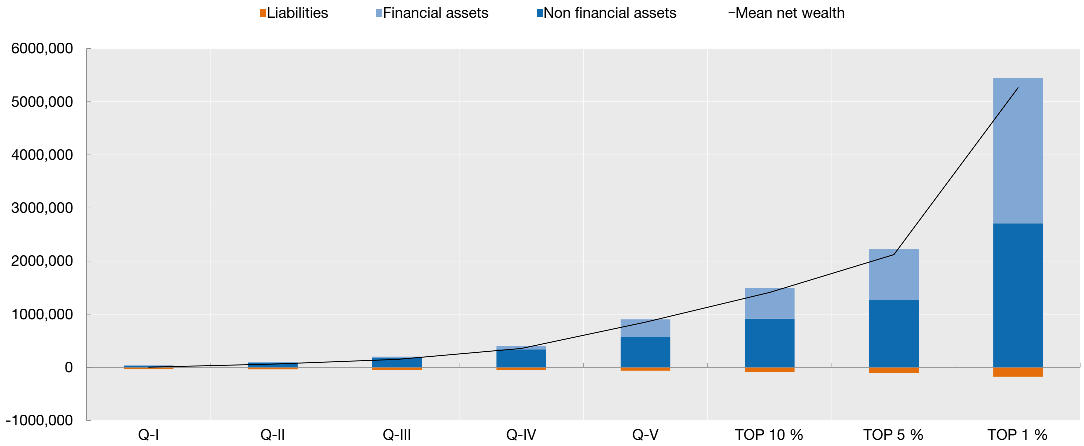
2010 or last available year




Note: Countries are ranked from left to right, in decreasing order of shares of wealth owned by the top 10% of wealth distribution. The bottom quintile data refers to the share of quintile I, quintile II and quintile III in the total wealth.

Source: OECD Wealth Distribution Database.

Figure 3. **Wealth composition and average net wealth by quintile in OECD area**
2010 or latest available year, values in 2005 USD PPPs

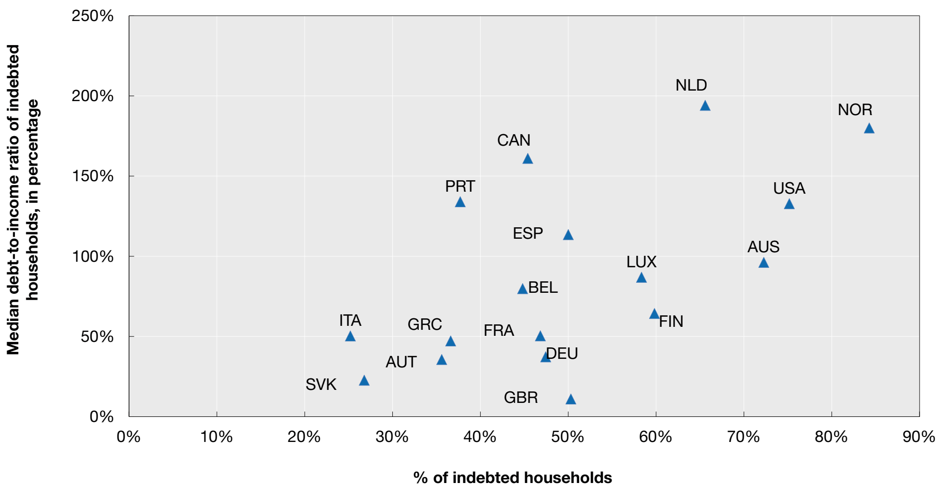



Source: OECD Wealth Distribution Database.

headed by a person under the age of 34, and 30% by one aged 35 to 44. Households headed by a person with an upper secondary or post-secondary non-tertiary degree represent about half of indebted and over-indebted households, while those with lower and tertiary education represent about 25%. In general, the share of indebted households increases with income levels in all countries: about 1/3 of households from the bottom income quintile have debts, as compared with more than 2/3 for the top quintile and top percentiles. Perhaps due to limited access to the credit market, the largest share of over-indebted households is in the middle class (i.e. quintiles two, three and four), rather than among lower or higher-income groups: Norway, the Netherlands, Austria and Germany are exceptions to this pattern.

A measure of the depth of indebtedness is the median debt-to-income ratio, as it reflects the number of years needed to reimburse debt (Figure 4). The stock of household debt represents as much as 94% of household income, on average, ranging from 11% in the United Kingdom to more than 160% in Canada, Norway and the Netherlands. The Netherlands, Norway and the United States

Figure 4. **Degree and depth of indebtedness for indebted households in selected OECD countries**
2010 or latest available year




Source: OECD Wealth Distribution Database.

Table 1. **Changes in mean net wealth between 2006 and 2012 in six OECD countries**
Annual percentage changes

| | Changes between 2006 and 2012 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Median | Bottom quintile | Middle three quintiles | Top quintile | Top 10% | Top 5% | Top 1% | Top wealth inequality | Bottom wealth inequality | Observed period |
| Australia | 1.0 | 1.0 | -4.0 | 1.1 | 1.0 | 0.8 | 0.3 | -2.7 | -0.7 | 0.3 | 2006-2012 |
| Canada | 5.1 | 5.9 | 3.4 | 6.0 | 4.7 | 4.1 | 3.5 | 1.3 | -1.8 | 0.1 | 2005-2012 |
| Italy | -1.3 | -2.2 | -25.3 | -2.1 | -0.8 | -0.6 | .. | .. | .. | 0.4 | 2006-2012 |
| Netherlands | -1.6 | -6.0 | 1.9 | -3.6 | -0.8 | -0.5 | -0.3 | 0.3 | 9.3 | 2.8 | 2006-2012 |
| United Kingdom | -0.1 | -2.5 | 5.0 | -1.9 | 1.1 | 2.0 | 3.1 | 8.4 | 7.2 | -0.3 | 2006-2012 |
| United States | -2.3 | -7.1 | -26.4 | -5.6 | -1.7 | -1.5 | -1.5 | -1.2 | 9.9 | 4.0 | 2007-2013 |

Note: Data for Canada and the United States refer to 2005-2012 and 2007-2013, respectively. Top wealth inequality ratio refers to the ratio of the top 5 wealth net minus the median net wealth divided by the median. The bottom wealth inequality ratio refers to the ratio of the median net wealth minus the bottom quintile net wealth divided by the median.

Source: OECD Wealth Distribution Database.

combine a large share of households having debts and a high level of indebtedness. Households in these countries (which are also those with the highest levels of over-indebtedness) may thus be the most exposed to the risk of large swings in asset prices.

## Trends in household wealth since the Great Recession

The impact of the 2008 financial crisis on household wealth can be examined for six OECD countries only, for which comparable data are available before and after 2008 (Australia, Canada, Italy, the Netherlands, the United Kingdom and the United States). Most recent developments (i.e. post 2012 or 2013) are not taken into account. Table 1 shows that:

» Mean net wealth per household has changed in very different ways during the financial crisis (increasing in Australia and Canada, falling in Italy, the Netherlands, the United Kingdom and the United States).

» Changes in wealth inequality have also varied across countries (in Australia and Canada, median net wealth has increased faster than the wealth of the upper percentiles; while median net wealth has fallen faster than wealth of the very rich in Italy, the Netherlands and the United States).

» Median net wealth has fallen in the United Kingdom, while net wealth of the top percentiles has increased, so that inequality at the top of the wealth distribution has unambiguously risen.

» Inequality at the bottom of the wealth distribution increased in all countries except the United Kingdom.

Higher prices of financial assets in more recent years (2013 to 2015) are likely to have boosted wealth at the top end of the distribution.

## Conclusions

Wealth is a critical element of household economic resources, but also one where availibility of comparable data remains severely limited. The OECD plans to regularly update the information in the *OECD Wealth Distribution Database*, extending its coverage and improving its comparability.

1. Similar estimates are reported by Maestri et al., 2014.

## Further reading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