



Compare your income – Methodology and conceptual issues

Compare your income has been developed as part of the *OECD's Inclusive Growth Initiative*, which aims to help countries achieve growth on a sustainable basis and raise living standards while respecting environmental boundaries, by providing equal opportunities to all. The tool is meant to provide a platform where people from all walks of life can express their views on income inequality. For this reason, when developing the tool we considered how to make the animation gender, ethnic and family neutral. In doing so, we faced a difficult trade-off between keeping the tool as simple as possible and being representative of all possible situations, and some simplifications were necessary. For instance, while users can only choose between male and female avatars, we are fully aware that a wider range of gender options could better describe those identities that do not fit into the gender binary of male and female. Similarly, while by default we show two-parent heterosexual couples, by no means we intend to dismiss other possible family types, such as same-sex parents, single parents with children or co-habiting adults. The colour of the faces of the avatars is neutral, in order to ensure that no specific ethnical group is represented.

There are a number of conceptual issues to take into account when trying to define how rich or poor someone is relative to the rest of the population. To help you better understand our methodology, here are some of the questions we considered when building *Compare your income*.

Where do the data come from?

The tool is built with the most recent data from the *OECD Income Distribution Database* ([oe.cd/idd](https://www.oecd.org/idd/)). This database is based on national sources (household surveys and administrative records) and on common definitions, classifications and data-treatments. The method of data collection used for the *OECD Income Distribution Database* aims to maximise international comparability as well as inter-temporal consistency of data. This is achieved by a common set of protocols and statistical conventions (e.g. on income concepts and components) to derive comparable estimates. Due to the increasing importance of income inequality and poverty issues in policy discussion, the database is now updated on a rolling basis, adding new data as and when received and validated. Due to a number of methodological issues that affect cross-country comparability, currently the database does not include Colombia. The OECD is working with the Colombian national statistical office to ensure the provision of high quality and comparable income data in the near future. Colombia will be included in the *Compare your income* web-tool once comparable income data become available.

How is income defined and why do we consider net income?

The definition of income used here refers mainly to cash income – excluding components such as imputed rents – regularly received over the year. Net income is defined as total market income (i.e. gross earnings, self-employment income, capital income), *plus* the current transfers received, *less* the taxes and social security contributions paid. This is the income that people have available to buy goods

and services, so it is a better measure of material living standards than pre-tax income or some measure of earnings alone.

Why is income measured at the level of the household?

The welfare of an individual in a household will depend not only upon their own income, but also on that of other household members. By measuring income at the household level, we are implicitly assuming that all individuals within the household are equally well off and therefore occupy the same position in the income distribution. In practice that might not be true, but it is the least arbitrary assumption that we can make based on the available data.

The *OECD Income Distribution Database* provides information on the *equivalised* disposable (i.e. net) income. 'Equivalising' means adjusting a household's income for its size, so that we can look at the income of all households on a comparable basis. The needs of a household grow with each additional member but – due to economies of scale in consumption– not in a proportional way. Needs for housing space, electricity, etc. will not be four times as high for a household with four members than for a single person. With the help of equivalence scales, each household is assigned a value in proportion to its needs. The equivalence scale used in the *OECD Income Distribution Database* divides household income by the square root of the household size. This implies that, for instance, a household of four persons has needs twice as large as one composed of a single person.

To bring back data at the household level, we then multiply income statistics available in the *OECD Income Distribution Database* by the square root of the household size. For instance, in the case of a household consisting of a couple with two children, we multiply the income data from the *OECD Income Distribution Database* by two (i.e. square root of four).

How is the poverty line computed?

We compute the income needed to be considered non-poor as half the median income of households of the same size of the respondent's. The median income is the income that divides the income distribution into two equal groups, half having income above that amount, and half having income below that amount.

Data on median income come from the *OECD Income Distribution Database*.

How are tax rates computed?

For most countries, taxes include direct taxes on income and wealth paid by households (net of refunds), as well as contributions paid by households to public social security schemes. However, for a few countries (e.g. Chile, Mexico, Turkey), only taxes on income are considered, which affects cross-country comparability. For each of the three levels of *taxable* income (i.e. income before taxes and social security contributions) shown in *Compare your income*, taxes refer to the amount paid by the *average* working-age household that earns that level of income. Both taxable incomes and taxes are *equivalised*. The household on the left represents the average working-age household in the third decile of the national income distribution; the household in the middle represents the average working-age household in the seventh decile; and the household on the right represents the average working-age household in the highest decile. Tax rates represent the *average* tax rate, so the amount of taxes divided by taxable income. Tax rates are rounded to the nearest whole percentage.

Data on taxable income come from the *OECD Income Distribution Database*, which is also the data source for taxes, except for Mexico and Turkey. For these two countries, data on tax rates refer to individual incomes, instead of equivalised, and come from information publicly available on the websites of the Mexican Tax Administration Service and of the Investment Office of the Presidency of the Republic of Turkey, respectively. Due to methodological differences, tax rates for Mexico and Turkey are only broadly comparable to those for the other OECD countries.

How are 'income diagrams' computed?

In order to further compare the perceived inequality in a society with the actual distribution of income, we divide the population into seven income classes. The 'lower-income' class (lowest bar) covers all individuals with a net income below 50% of median income of the total population. Therefore, the demarcation of the lowest group is equal to the definition of poverty used in this tool. The 'average-income' class covers all individuals with a net income between 50 and 150% of the median income and spans three bars: from 50 to 80% of the median income; from 80 to 110% of the median income; and from 110 to 150% of median income. Similarly, the 'higher-income' class identify all individuals with a net income above 150% of the median income and covers the three highest bars of the diagrams: from 150 to 200% of the median income; from 200 to 250% of the median income and above 250% of the median income.

Obviously, the demarcation of classes remains somewhat arbitrary. However, the demarcation of single groups is not the focus of our analysis. The intention of the definition of these income classes is basically the graphical illustration of the density function of incomes.

Drawing such income diagrams requires information on income at the percentile level, which is currently not available in the *OECD Income Distribution Database*. For most countries, information on income percentiles have been provided to the OECD by national data providers, and is based on those national sources that are deemed to be most representative for each country. Such information is currently not available for four OECD countries: Chile, Japan, Korea and Turkey.

To which year do data refer?

The information available in the *OECD Income Distribution Database* is more up-to-date when compared to information available through many other statistical sources, but still reflects the long time lags that characterise data collection in this field in most OECD countries. For most countries, data on income and poverty shown in this tool refer to 2017. To bring the figures up to date, we have adjusted them in line with changes in the consumer price index for all goods up to 2019.