

Quality of life indicators - measuring quality of life

Statistics Explained

This article is part of the Eurostat online publication [Quality of life indicators](#) , providing recent statistics on the quality of life in the [European Union \(EU\)](#) . The publication presents a detailed analysis of many different dimensions of quality of life, complementing the indicator traditionally used as the measure of economic and social development, [gross domestic product \(GDP\)](#) .

The present article is a general introduction to the set of '8+1' statistical articles (see below), sketching the conceptual, policy and methodological background: what is quality of life and how can its different aspects be measured adequately?

The need for measurement beyond GDP

Quality of life is a broad concept that encompasses a number of different dimensions (by which we understand the elements or factors making up a complete entity, that can be measured through a set of sub dimensions with an associated number of indicators for each). It encompasses both objective factors (e.g. command of material resources, health, work status, living conditions and many others) and the subjective perception one has of them. The latter depends significantly on citizens' priorities and needs. Measuring quality of life for different populations and countries in a comparable manner is a complex task, and a scoreboard of indicators covering a number of relevant dimensions is needed for this purpose.

[National accounts](#) aggregates have become an important indicator of the economic performance and living standards of our societies. This is because they allow direct comparisons to be made easily. [Gross Domestic Product \(GDP\)](#), one of these aggregates, is the most common measure of the economic activity of a region or a country at a given time; many decision and policy makers use it as the standard benchmark, often basing their decisions or recommendations on it. It includes all final goods and services an economy produces and provides a snapshot of its performance. GDP is very useful for measuring market production (expressed in money units). However, although it was not intended as an indicator of social progress, it has been considered to be closely linked to the well-being of citizens. The following are a number of reasons why GDP is not sufficient for this purpose, and therefore needs to be complemented by other indicators.

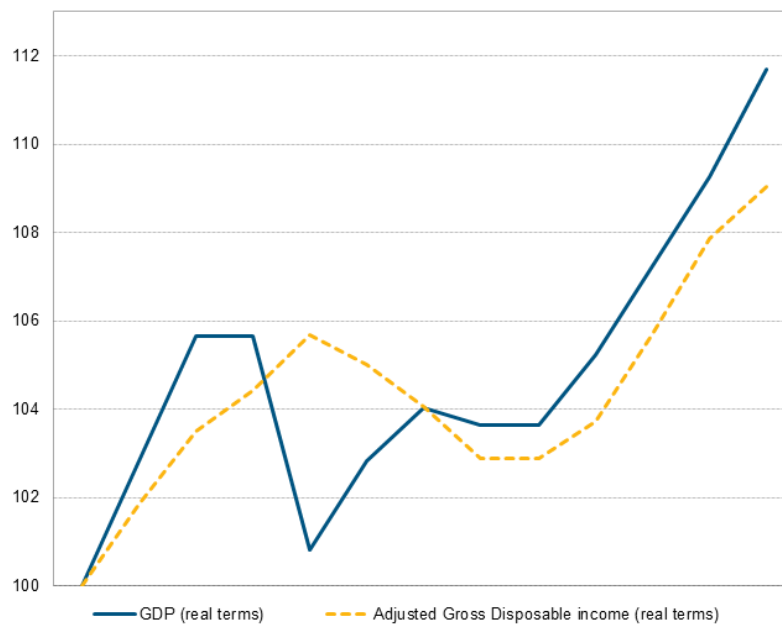
Other measures of income reflect better households' situations

While GDP is very useful for measuring market production and providing an indicative snapshot of an economy at a given time, it does not provide a comprehensive picture of how well-off the citizens of a society are. As described in the J. Stiglitz, A. Sen and J.P. Fitoussi Report ([Measurement of Economic Performance and Social Progress - 2009](#)) citizens' material living standards are better monitored by using measures of household income and consumption, and ideally joint measures of income, consumption and wealth at individual level should be used. Stiglitz, Sen and Fitoussi argue that the income of a country's citizens is 'clearly more relevant for measuring the well-being of citizens' than domestic production¹.

¹Stiglitz, Sen, Fitoussi, et al. (2009) Report by the Commission on the Measurement of Economic Performance and Social Progress, p.24

In many cases, household incomes may develop differently from real GDP and therefore provide a different picture of this aspect of citizens' well-being. As shown in Figure 1, for the period 2005–2012, GDP (in real terms) in the EU-28 reached its peak in 2007- 2008 and plunged to a record low a year later, in 2009. This sharp decrease reflects the beginning of the financial crisis. The decrease is however not reflected in the part of national accounts income that is generated by the household sector, during the first years of the crisis. On the contrary, households' adjusted gross disposable income for the same period (2007-2009) has slightly increased, and started to decrease slowly the next year, reaching the lowest point in the period analysed in 2012-2013. One of the reasons for this apparent inconsistency is that social transfers (social security benefits, reimbursements etc.) seem to have absorbed and softened the effect of the crisis (at least during the first few years). Starting in 2014 the trend is positive for both indicators, but it can be noted that growth is at a slower pace for the part of the Gross National Product that households can benefit from.

Figure 1. GDP versus Gross Disposable Income of households, EU-28, volume/ real terms (2005=100), 2005-2017



Source: Eurostat: Main GDP aggregates per capita [nama_10_pc] and Non-financial transactions [nasa_10_nf_tr]



Figure 1: GDP versus gross disposable income of households, EU-28, in volume/real terms, 2005=100, 2005-2017 Source: Eurostat

Increasing GDP today, depleting resources for tomorrow

Social, environmental and economic progress does not always go hand in hand with an increase in GDP. For example, if a country decides to cut down all its forests, it will dramatically increase its timber exports, thus increasing its GDP. If GDP were the only indicator of quality of life, this would mean that the population of this country would have greatly improved its well-being. However, the deforestation would have a significant impact on the population's quality of life in the mid and long term: loss of natural habitat, soil erosion and more. GDP definitely measures quantity, but not necessarily other aspects of production (such as distribution and potential impacts for the future).

GDP is an aggregate measure and as such cannot inform us about wealth distribution amongst the population

Even if 'quantity' were the only relevant measure of economic performance and quality of life, GDP would still not tell us the whole story about living standards. A significant increase in a society's average GDP does not automatically translate into better living standards for most of its citizens. The increase could benefit only a

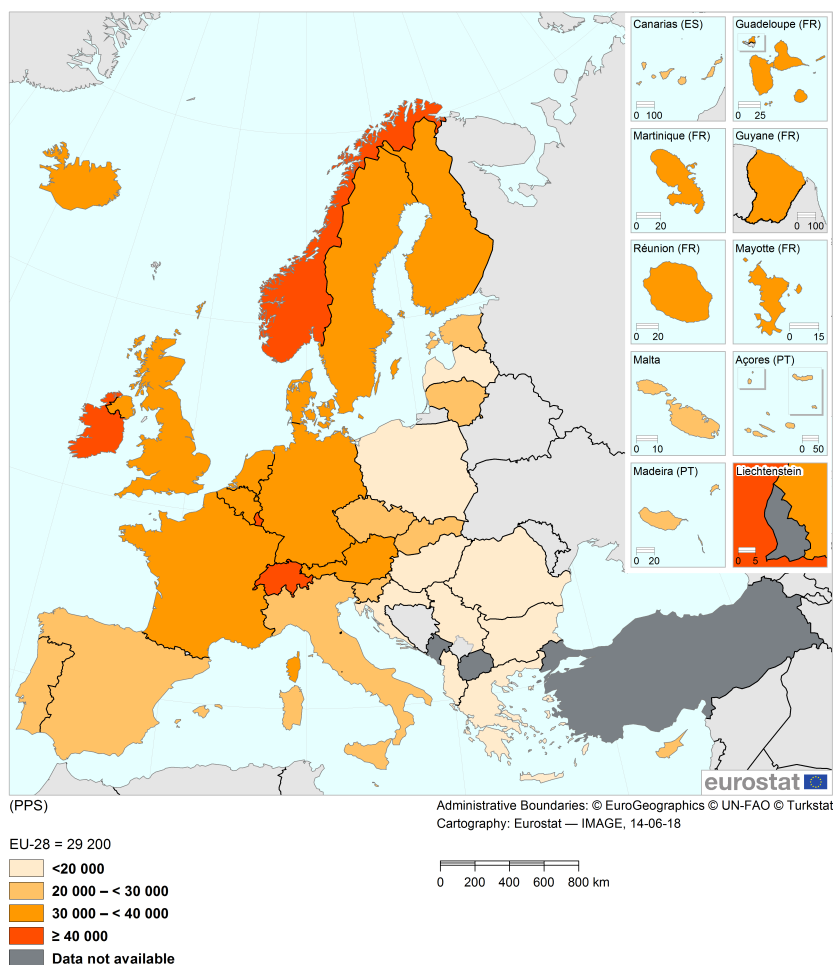
small part of society, leaving many groups of citizens at the same level in terms of wealth, or even worse off than before. Consequently, overall measures of economic and social well-being must also include distribution indicators in order to provide a more realistic picture of the living standards and quality of life of a society's citizens.

GDP and other economic measures need to be complemented with indicators covering other important domains in order to measure well-being

Moving beyond economic performance, a more comprehensive, wide-ranging approach is needed when trying to define and measure quality of life. While it remains very difficult to provide an overall definition with specific measurable indicators, quality of life definitely includes more than just economic production and GDP figures. It should also be stressed that some of the indicators included in this scoreboard are subjective. They therefore reflect the perceptions of individuals, their own assessment of different aspects of life and overall quality of life and their often different priorities. This type of data can only be obtained through surveys.

Different examples throughout Europe show that GDP does not always go hand in hand with other indicators that contribute to a better quality of life. Luxembourg had by far the highest GDP per capita in 2016 (75 100 PPS), but this is partially due to the high percentage of cross-border commuters in its workforce, who contribute to GDP production but are not accounted for when calculating the per capita figures. Luxembourg was followed by Ireland (53 100 PPS), the Netherlands and Austria (both 37 200 PPS). At the other end of the spectrum, Bulgaria has the lowest GDP per capita (14 200 PPS), followed by Romania (17 000 PPS) and Croatia (17 500 PPS). While Romania's GDP per capita is the second lowest in the EU (17 000 PPS, compared to the EU-28 average of 29 200 PPS) it has the lowest percentage of people with arrears on their mortgage or rent payments (0.5 % in 2016). Spain and Italy's GDP per capita approximately matches the EU average, but they rank first in life expectancy (83.5 and 83.4 years respectively) throughout the EU. Germany has one of the highest GDP per capita figures in Europe (36 000 PPS), but it also has the third widest gender pay gaps (21.5 % in 2016) in the EU. These are only a few examples that demonstrate the need to complement GDP and other economic indicators with a wider range of data, in order to be able to get a broader picture.

GDP per capita, 2016
(PPS)



Note: Greece, Spain, France, Cyprus, the Netherlands, Portugal, Romania, Switzerland and Albania, provisional data.
Source: Eurostat (online data code: nama_10_pc)

Map 1: GDP per capita in PPS, 2016 Source: Eurostat (nama10pc)

Framework for measuring quality of life

Discussions on how to better measure the progress of societies and their well-being and how to sustain quality of life in the future, have led to several important initiatives, including [the Stiglitz/Sen/Fitoussi \(SSF\) Commission Report \(2009\)](#) and [the European Commission 'GDP and beyond' communication \(2009\)](#). Following these, there was a growing consensus that societies need to find information to complement that provided by GDP figures. This provides a much larger context for the information provided by national accounts aggregates. [The European Statistical System](#) quickly reacted to the report by setting up [The Sponsorship Group on Measuring Progress, Well-Being and Sustainable Development](#), which was dedicated to develop specific and concrete sets of indicators that answer the challenges described in the 'GDP and Beyond' Communication and the SSF report. It presented its final report in November 2011. The report stressed the need for the European Statistical System to use a multidimensional approach when defining and trying to measure quality of life, to develop indicators for measuring sustainability and to use complementary indicators to the GDP coming from [National Accounts](#) that would better reflect the situation of households. An Expert Group coordinated by Eurostat with the mandate of developing a scoreboard of [Quality of Life Indicators](#) was set up on the basis of this recommendation. It included experts coming from 10 national statistical offices, scientific experts and representatives of international organisations such as the [OECD](#) and the European Foundation for the Improvement of Working and Living Conditions ([Eurofound](#)). It met bi-annually between 2012 and 2016 and delivered the [Final report of the expert group on quality of life indicators](#) in 2017. The list of indicators that was set up by Eurostat with the help of this Expert Group can be found on the [dedicated section on Quality of life](#).

8+1 dimensions of quality of life

Based on academic research and several initiatives, the following 8+1 dimensions/domains have been defined as an overarching framework for the measurement of well-being. Ideally, they should be considered simultaneously, because of potential trade-offs between them:

- [Material living conditions \(income, consumption and material conditions\)](#)
- [Productive or main activity](#)
- [Health](#)
- [Education](#)
- [Leisure and social interactions](#)
- [Economic and physical safety](#)
- [Governance and basic rights](#)
- [Natural and living environment](#)
- [Overall experience of life](#)

Material living conditions

Material living standards are measured on the basis of three sub-dimensions: income, consumption and material conditions (deprivation and housing). Income is an important indicator as it has an impact on most of the other indicators in the framework. There are several different indicators within this sub dimension, taken from both national accounts and household surveys (net national income, household disposable income based on the [EU-SILC](#)). The same is true for consumption, within which some aggregated indicators are taken from national accounts (actual individual household consumption [per capita](#)), and other indicators for household consumption are to be developed in the future from the [Household Budget Survey](#). Joint indicators of income, consumption and wealth are also under development and have the potential to provide the most complete perspective on the situation of households. Nevertheless, for the moment the wealth aspect is covered in this framework under the sub-dimension Economic safety. Material conditions (deprivation and housing) provide important complementary information to these money-based approaches and the indicators selected for this sub-dimension are also based on the EU-SILC.

Productive or main activity

Productive or main activity dimension is measured through three sub-dimensions: quantity of employment, quality of employment and other main activity (inactive population and unpaid work). A number of activities fill up citizens' lives every day, the most prominent one being their work. Indicators measuring both the quantity and the quality of jobs available (working hours, balancing work and non-working life, safety and ethics of employment) are some of the indicators used in the European Union to measure this aspect of quality of life, coming mostly from the [EU-LFS](#) , and also [Structure of Earnings Survey](#)) and administrative data. Not all the population is in employment, therefore it is important to include in this dimension also indicators referring to the inactive population and to unpaid work. In fact, the subject of unpaid work is an important indicator for both quality of life and gender equality. Time Use Survey data is the only potential source of comparable information on this topic, but it is collected on a voluntary basis and it does not cover all EU Member States.

Health

Health is an essential part of the quality of life of citizens and it can also be considered as a form of human capital. Poor health can affect the general progress of society. Physical and/or mental problems also have a very detrimental effect on subjective well-being. The health situation in the European Union, in the context of Quality of life, is mainly measured through three sub dimensions: health outcome indicators such as life expectancy (based on mortality tables), the number of healthy life years (combining the information on life expectancy with a survey variable on self-declared limitations in activity) and subjective assessments of own health, chronic diseases and limitations in activity (data based on the [EU-SILC](#)); health determinants (healthy and unhealthy behaviours, such as smoking, alcohol and fruit and vegetables consumption and exercising, data

from the [European health interview survey \(EHIS\)](#)); and access to healthcare (data based on the EU-SILC).

Education

In our knowledge-based economies, education plays a pivotal role in the lives of citizens and is an important factor in determining how far they progress in life. Levels of education can determine the job an individual will have. Individuals with limited skills and competences are usually excluded from a wide range of jobs and sometimes even miss out on opportunities to achieve valued goals within society. They also have fewer prospects for economic prosperity. It is also the most important form of human capital, at societal level. In the European Union, this dimension is measured by currently available indicators grouped in four sub dimensions: population's educational attainment (including the number of early school leavers); self-assessed and assessed skills; participation in life-long learning and opportunities for education (rate of enrolment of pupils in pre-primary education). A variety of data sources is used, the most important being the [EU-LFS](#). Information is collected also through OECD'S [PIACC survey \(Programme for the International Assessment of Adult Competencies\)](#) ; the [Adult education survey](#) ; the [Community survey on ICT usage in households and by individuals](#) and administrative data.

Leisure and social interactions

The power of networks and social connections should not be underestimated when trying to measure the well-being of an individual, as they directly influence life satisfaction. In the European Union, this dimension is measured through 2 sub-dimensions, the first one being leisure activities. Both quantity (how often citizens spend time with people at sporting or cultural events) and quality (their satisfaction with time use), as well as (lack of) access to this type of activity due to lack of resources or facilities are measured. Social interactions is the second sub-dimension, and activities with others (frequency of social contacts and satisfaction with personal relationships) and for others (volunteering in informal contexts), the potential to receive social support (help from others) and social cohesion (trust in others) are included in the framework under this topic. The data in this dimension is updated once every few years, as the main source of data comes from [EU-SILC Ad-hoc Modules](#) on Social and Cultural Participation (collected so far in 2006 and 2015) and Subjective Well Being (collected in 2013 and 2018).

Economic and physical safety

Security is a crucial aspect of citizens' lives. Being able to plan ahead and overcome any sudden deterioration in their economic and wider environment has an impact on their quality of life. Safety is measured in terms of two sub-dimensions, physical safety (e.g. the number of homicides per country from police records and the proportion of those who perceive there is crime, violence or vandalism in the area in which they live collected in [EU-SILC](#)) and economic safety. For the latter, wealth (the value of assets owned minus the value of liabilities owed at a point in time by a household) indicators should ideally be used, but currently there is no comparable data on the topic for all European countries. The ability to face unexpected expenses and having or not having arrears are therefore used as proxy variables, based on data collected through EU-SILC. Assets (especially when they are of liquid type) are an important indicator of economic resilience and shock resistance, and therefore are an important aspect of the quality of life of Europeans.

Governance and basic rights

The right to get involved in public debates and influence the shaping of public policies is an important aspect of quality of life. There are 3 sub-dimensions covered in the governance and basic rights dimension: trust in institutions and public services; discrimination and equal opportunities and active citizenship. Providing the right legislative guarantees for citizens is a fundamental aspect of democratic societies. Good governance depends on the participation of citizens in public and political life (for example, through active citizenship actions such as attending a demonstration, sending a letter to those in office or signing a petition, indicator collected in the [2015 SILC Ad Hoc Module](#)). It is reflected also in the level of trust of citizens in the country's institutions (collected in the [2013 SILC Ad Hoc Module](#)), satisfaction with public services and the lack of discrimination. Gender discrimination measured in terms of the unadjusted pay gap (based on the [SES](#)) and gender employment gap, as well as the employment gap of immigrants compared to the national population (both based on the [LFS](#)) are the only indicators included in this sub-dimension at the moment, but more indicators could be developed in the future.

Natural and living environment

The protection of the environment has been very high on the European agenda over the last few decades.

In the last Eurobarometer on the topic, collected in 2017, 94% of Europeans declared that protecting the environment was very important for them. Exposure to air, water and noise pollution can have a direct impact on the health of individuals and the economic prosperity of societies. Environment-related indicators are very important for assessing quality of life in Europe and in general. Subjective indicators, such as individuals' own perceptions of noise levels or the existence of pollution and grime in their local area and their satisfaction with the environment and the green areas in their local area, based on the [EU-SILC](#)) are included in this dimension. Objective indicators (the amount of pollutants present in the air, and in particular the values for [particulate matter](#) as they are less dependent on climacteric conditions and therefore more comparable) are also included. This indicator is collected by the [European Environmental Agency](#) .

Overall experience of life

Overall assessment of one's life is measured using three sub-dimensions: life satisfaction (cognitive appreciation), affect (a person's feelings or emotional states, both positive and negative, typically measured with reference to a particular point in time) and eudaemonics (a sense of having meaning and purpose in one's life, or good psychological functioning.). This is in line with the [OECD guidelines on Measuring Subjective Well-Being](#) . These indicators were collected within the [2013 EU-SILC Ad-Hoc Module](#) (available in 2015) and the data collection is being repeated in the 2018 EU-SILC Ad-Hoc Module (available in 2020).

Conclusion

As highlighted above, it remains difficult to measure the quality of life of (European) citizens but preliminary results show it is worth going beyond GDP figures. A multidimensional approach is necessary to get a more comprehensive view of quality of life and avoid any misleading conclusions.

Source data for tables and graphs

- [QoL- Measuring Quality of Life](#)

Data sources

The collection of microdata on well-being is a key objective. Following Eurostat's proposal to collect microdata on well-being within the 2013 module of [SILC](#) , data for subjective indicators will start to be collected as European statistics on a regular basis in the relatively near future (starting probably after 2022). In the long term, while data for several of the required indicators are readily available from other sources (e.g. [LFS](#) for the Productive or Main Activity dimension), EU-SILC should be further developed to serve as the core EU instrument connecting the different dimensions of quality of life at an individual level and reflecting their dynamic interdependencies. In order to make the system of indicators less complex and to allow for analysis covering the 8+1 dimensions of quality of life, a very limited number of headline indicators has been selected for each dimension, while synthetic indicators could be developed for highly correlated variables. A scoreboard of uncorrelated primary indicators should complete the picture.

- [Quality of life indicators](#) (online publication)
- [Quality of life facts and views](#)
- [The EU in the world - living conditions](#)
- [All articles on poverty and social exclusion](#)
- [All articles on household income, expenditure and debt](#)

Publications

- [Final report of the expert group on quality of life indicators](#)
- [Quality of life in Europe - Facts and Views](#)
- [Report by the Commission on the Measurement of Economic Performance and Social Progress - Stiglitz J. E. et alii, 2009 \(PDF\)](#)
- [Sigma – The Bulletin of European Statistics – GDP & Beyond](#)

Dedicated section

- [Quality of Life Indicators](#)

Legislation

- [COM final 433/2009 - European Commission - GDP and beyond – Measuring progress in a changing world](#)
- [Income and Living Conditions Legislation](#)
- [Labour Force Survey Legislation](#)

External links

- [European Quality of Life Survey 2016](#)
- [UN World Happiness Report](#)
- [OECD Better Life initiative: Measuring Well-being and Progress](#)