

Regional inequalities in the EU

SUMMARY

The issue of inequality has gained increasing importance in the public and political agenda in the aftermath of the financial and economic crisis, and in the context of political movements representing the 'places left behind'. Inequality may relate to income and wealth, but also to a variety of aspects such as access to basic services, education and infrastructure. In the context of regional disparities, it may also refer to differing levels of socio-economic development.

Common inequality measures have revealed that, while regional disparities have been decreasing when considering the EU as a whole, they have been increasing within some countries. A number of persistently low-growth regions exist in southern Europe, as do many low-income regions in eastern Europe. Every Member State has a number of 'inner peripheries', which are habitually located in post-industrial or rural areas and often characterised by high levels of unemployment, poor infrastructure, lack of skilled workforce and hampered accessibility.

Strengthening social, economic and territorial cohesion, and reducing regional disparities is the main goal of EU cohesion policy. As a major EU tool to address regional inequalities, this policy provides a wide range of support for businesses and activities in areas such as research, environment, transport, employment, social inclusion, education and institutional capacity-building. Such support is crucial for addressing the underlying problems of many lagging regions, helping them create better living conditions, retain and attract talent, encourage investment, improve productivity and develop regional innovation systems. Together with economic governance frameworks and EU support for structural reform, EU cohesion policy can play an important role in reducing inequality, in a comprehensive and multidimensional way.

While traditionally, GDP per capita has been used to assess regional convergence, a variety of new indicators tracking progress on issues correlated with inequality are available for this purpose today. Moreover, the proposals for the EU's post-2020 policy framework include new additional funding allocation criteria such as youth unemployment, education levels, climate change, and the reception and integration of migrants. These changes possibly indicate a shift towards a more comprehensive view of territorial convergence in the EU.



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Introduction

In its Article 174, the Treaty on the Functioning of the European Union (TFEU) states that the EU's goals include 'strengthening of its economic, social and territorial cohesion' and 'reducing disparities between the levels of development of the various regions and the backwardness of the least favoured regions'. The [social scoreboard](#), which monitors the implementation of the [European Pillar of Social Rights](#), adopted in 2017, includes income inequality¹ alongside several other indicators closely related to providing more equal chances. This corresponds to one of the key concepts behind the pillar: the achievement of equal opportunities for all.

According to a 2015 European Commission [study](#), inequality has been on the rise in many Member States in the past three decades, and was further exacerbated by the 2008 economic crisis. In some countries, income inequality is not particularly high, but wealth inequality has been on the rise. The issue of inequality has also gained importance in the public debate, fostered by well-publicised economic research literature by economists such as Tony Atkinson and Thomas Piketty.² Overall, increasing inequalities are believed to have a negative [impact](#) on economic growth, and to undermine social peace and political stability.

Inequality can be [defined](#) in various ways. The traditional view focuses on 'inequality of outcomes', usually referring to the distribution of income and wealth in society. This type of inequality is believed to result from a combination of factors beyond one's control (such as family background, ethnicity or gender), as well as effort. A more rights-based approach proposes the concept of 'inequality of opportunity', aiming to ensure an equal starting point for all (such as access to education and healthcare). Policy response may thus depend on the approach taken. About [a third](#) of the 2014-2020 EU budget is dedicated to implementing the EU cohesion policy, whose primary aim is to reduce regional disparities and strengthen social, economic and territorial cohesion. Funding earmarked for cohesion provides various kinds of support, including to businesses, transport infrastructure and skills development, in order to address several underlying drivers of regional inequalities.

Measuring inequality and convergence

Common measures of income inequality

Income inequality can be measured in a variety of ways. The most common indicators of income inequality used in the EU context are the S80/S20 ratio and the Gini co-efficient (see Box). **The S80/S20 ratio** is the indicator used for measuring inequality in the social scoreboard accompanying the European Pillar of Social Rights. This measure compares the income of the richest 20 % of households to the income of the poorest 20 % of households. For instance, an S80/S20 of 5.0 means that the richest 20 % of households receive five times as much income in a year as the poorest 20 %. A higher S80/S20 ratio implies more income inequality, while a lower number implies less. An S80/S20 ratio of 1 means perfect equality of income (all households having the same annual income). On the other hand, an S80/S20 ratio of 10 means perfect inequality (one person having all the income).

The latest available EU-28 data (for 2016) shows that the top 20 % of the population received 5.2 times as much income as the bottom 20 %. There were considerable variations across countries, ranging from 3.5 in the Czech Republic and 3.6 in Slovenia, Slovakia and Finland, to over 6.0 in Latvia, Italy, Spain, Greece, and more than 7.0 in Lithuania and

Income quintile share ratio (S80/S20)

The income quintile share ratio or the S80/S20 ratio is a measure of the inequality of income distribution. It is calculated as the ratio of total income received by the 20 % of the population with the highest income (the top quintile) to that received by the 20 % of the population with the lowest income (the bottom quintile). All incomes are compiled as 'equivalised disposable income' (i.e. the total income of a household after tax and other deductions, that is available for spending or saving, divided by the number of household members converted into equalised adults).

Source: [Eurostat glossary](#), 2019.

Romania, with the highest inequality ratio of 7.9 in Bulgaria. Overall, there was a rise in inequality in many, but not all Member States. Income inequality has increased the most in Portugal, Greece and Bulgaria; in many Member States it has hardly changed (Hungary and France); and in some it has fallen (Ireland, Luxembourg, Italy).

The Gini coefficient is the most common measure of income inequality used internationally. It compares each household's income position to that of all other households in order to measure income distribution. For the EU-28, the Gini coefficient was around 30.7 % in 2017. The highest income disparities of at least 35.0 % were recorded in Bulgaria and Lithuania. A group of countries – Estonia, Italy, Romania, the United Kingdom, Greece, Portugal, Spain and Latvia – had a Gini coefficient above the EU-28 average (31.0 % – 34.5 %). On the other end of the spectrum were countries with a more even income distribution (26.0 % or less): Slovakia, Slovenia, the Czech Republic, Finland and Belgium.

Gini coefficient

The Gini coefficient (sometimes called Gini index) measures the extent to which the distribution of income within a country deviates from a perfectly equal distribution. A coefficient of 0 expresses perfect equality where everyone has the same income, while a coefficient of 1 expresses full inequality where only one person has all the income. It can also be presented as a percentage with values ranging from 0 to 100.

Source: [Eurostat glossary](#), 2019.

Overall for the EU-28, the Gini value has registered a slight decrease since its peak in 2014 and 2015 at 31 %. However, differences between the Member States still persist. Both measures (the S80/S20 and Gini) show a similar picture of inequalities between countries. It is important to point out that, while common [drivers](#) of inequality exist in all Member States (for instance, unemployment and technological progress rewarding high-level skills), the specific national and regional contexts may vary. Moreover, the distribution of income tends to be more [equitable](#) among the older generations (65+ group) across the EU, which may be attributed to changes in tax and social transfers systems.

Other common statistics associated with income inequality and income distribution include the median equivalised net income; the income share of the bottom 40 % of the population; and the relative median at-risk-of-poverty gap.³ These are measured by Eurostat and monitored under the EU statistics on income and living conditions (EU-SILC), as well as under initiatives such as the European Commission's annual 'Employment and Social Developments in Europe' [review](#) and UN Social Development Goal 10 ([reduced inequalities](#)) in the EU context. Techniques for measuring income inequality at regional level are currently being developed.

Regional convergence

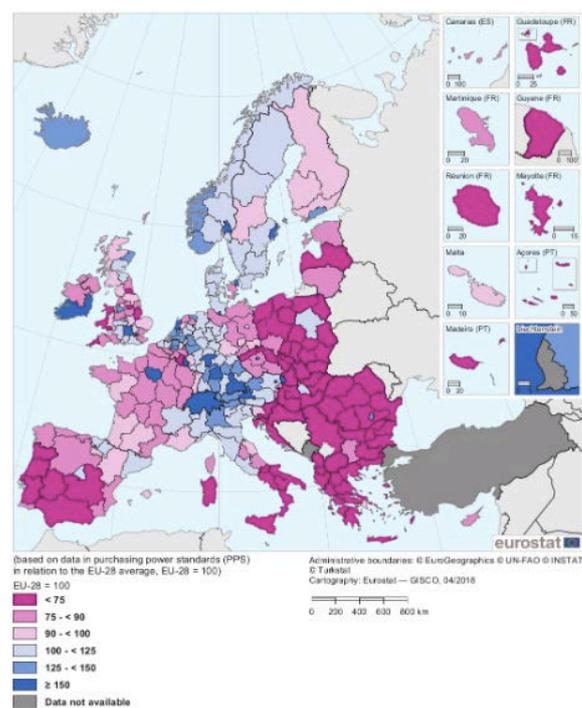
While EU cohesion policy aims to promote a comprehensive approach – i.e. social, economic and territorial cohesion – the measurement of the reduction in regional disparities has mainly been [based](#) on the convergence of regional levels of GDP per capita relative to the EU average.

In 2016, 101 out of the 276 NUTS2 regions⁴ [recorded](#) a level of GDP per capita above the EU-28 average. These regions were largely found in an area stretching from northern Italy to Austria and Germany, which then split off in two sections: the first covering several regions in the Benelux countries, southern England and southern Ireland, and the second covering the Nordic Member States (see Map 1).⁵ A prominent trend is the concentration of pockets of relatively high wealth creation in almost every capital city region. Particularly high ratios were [recorded](#) in Inner London – West with a GDP per capita six times as high as the EU-28 average (i.e. 611 %), Luxembourg (258 % of EU average), the Irish capital city region (217 % of EU average) and the Belgian capital city region (200 % of EU average). One should keep in mind, however, that these statistics refer to a fairly large area, while a higher level of detail might demonstrate internal disparities within the region. In the context of EU-wide convergence, it is also interesting to note that in 2016 the majority of Spanish, French, UK and southern Italian regions had levels of GDP per capita lower than the EU-28 average. Such regions (sometimes described as 'left behind') are usually either sparsely populated, rural and characterised by net emigration, or post-industrial.

In the 2007-2016 period, which also witnessed Europe's financial and economic crisis, GDP per capita [increased](#) in 117 NUTS2 regions, while 157 regions experienced a decline. GDP per capita grew at a faster pace than the EU-28 average in many 'new' Member States (Bulgaria, Hungary, Poland, Romania, Slovakia, Lithuania, Latvia, Estonia and the Czech Republic). Many regions in Germany and Austria also experienced a fast growth. By contrast, GDP per capita grew slower than the EU-28 average in Greece, Spain, Croatia, Italy, the Netherlands, Slovenia, Finland and Sweden, France and Portugal. These trends lead to a diminishing East-West divide.

A 2009 European Commission [study](#) explored two main processes of convergence among regions in the EU. The first one, Beta-convergence, refers to a process where poor regions grow faster than rich ones and therefore catch up with them. The study found that a Beta-convergence process was taking place among EU regions, at both EU-15 and EU-27 level; however, the speed of convergence was not constant over time. Moreover, convergence was sometimes higher within some groups of regions compared to others (such as core and periphery regions), and often lower between these groups. While Beta-convergence focuses on the catching-up processes (for instance, towards the EU average), the second process, Sigma-convergence, refers to a reduction of disparities among regions in time. The authors suggest that the concept of Sigma-convergence is more revealing in terms of describing the distribution of income across economies, and recommend relying on several methods for this purpose (rather than on just one summary measure such as the Gini coefficient). This allows to track individual movements within the distribution of regional GDP per capita in order to detect the mechanisms in the convergence process. Using a variety of measures, the authors arrived at the conclusion that, while regional disparities are declining in the EU as a whole, more detailed data show that this decline can be attributed to upward movements in the lower end of the distribution, with a simultaneous increase in disparities within a number of Member States.

Map 1 – GDP per inhabitant (PPS) relative to EU average, 2016



Source: [Eurostat](#), 2019.

Multidimensional approach to inequality

There is an increasing consensus in the global community that measuring inequality in a one-dimensional economic way must be complemented by other measures, in line with the concept of inequality of opportunity. This is supported by the fact that inequality is correlated with a variety of underlying factors.

However, inequality of opportunity is difficult to measure with the use of standard indicators. Proxy indicators are thus needed to assess progress. The choice of such indicators will predominantly depend on what are seen as drivers of inequality. Low educational performance and high poverty levels are believed to be highly [correlated](#) with inequality, which suggests that these areas should be carefully monitored and targeted via policy measures. Regional inequalities can also be attributed to a [wide range of factors](#), including changes caused by globalisation (e.g. relocation and outsourcing of manufacturing and service activities), the legacy of former economic systems, geographic remoteness, and the availability of human, natural and capital resources. Many of these

factors translate into social deprivation, poor-quality housing, healthcare or education, higher levels of unemployment, or inadequate infrastructure.

Measuring reduction in disparities with the help of the GDP per capita measure presents only a partial picture. If the goal is to gain a comprehensive overview of progress made by EU regions, then complementary measures could be useful. Moreover, analysing income inequality requires the development of regional data at NUTS2 level. Currently, a variety of [indexes](#) measuring other areas related to inequality exist at regional level. The EU regional [Social Progress Index](#) tracks a number of crucial indicators related to healthcare, access to knowledge and personal rights, etc., in all EU NUTS2 regions. The [Regional Competitiveness Index](#) tracks progress with regard to infrastructure, technology, innovation and macroeconomic stability, among others. The EU [Quality of Government Index](#) focuses on corruption, impartiality and quality of public service delivery. These indexes, published at regular intervals, allow to assess progress made on a number of variables both over time and in comparison to other regions.⁶

It is also important to note in this context that EU cohesion policy – the main investment tool to redress regional disparities – is often assessed on the basis of the narrowly understood concept of convergence (measured by GDP per capita). However, given the diversity of programmes implemented as part of the cohesion policy, there is possibly a scope for looking at convergence and inequality as facets of a multidimensional phenomenon. A step in this direction has been made in the European Commission [proposals](#) on the 2021-2027 multiannual financial framework, where GDP remains the leading criterion for cohesion policy allocations, but is complemented with additional criteria, such as youth unemployment, low education levels, climate change, and the reception and integration of migrants.

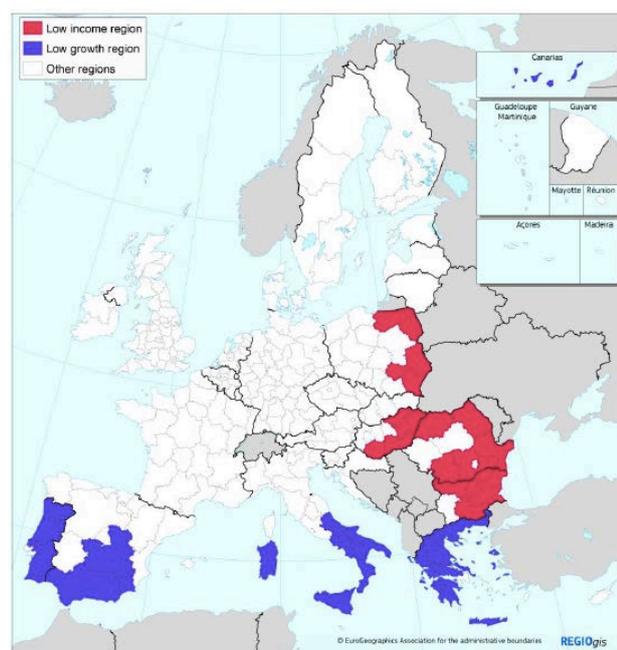
Policy response

The 'Lagging regions [report](#)', published by the European Commission in 2017, identified two types of lagging regions in the EU, whose level of development is significantly lower than the EU average (see Map 1 above). The first type are low-growth regions (mainly located in the southern EU Member States), which experience a persistent lack of growth. These regions have a GDP per capita of up to 90 % of the EU average and did not converge to the EU average between 2000 and 2013. The second type, the low-income regions (mainly located in the eastern EU Member States), are the ones remaining far below the EU average GDP per capita. They include all regions with a GDP per capita below 50 % of the EU average in 2013. An [estimated](#) 83 million people (one in six EU residents) live in these two types regions.

The report identifies a variety of factors that need to be addressed in order to accelerate the catching-up process. While there is no one-size-fits-all solution, investment needs usually include human capital, innovation, high-quality institutions and better accessibility. Macroeconomic imbalances caused by the crisis undermined the convergence process and wiped out many of the earlier economic advances. Low-growth regions suffered a combination of stagnating productivity, rising labour costs and high debt levels, which reduced their export share and investment capacities. In general, lagging regions struggle with low productivity, educational attainment and employment rates compared to other regions in their country. The business environment can also vary within the same common national framework, depending on the efficiency of local and regional administrations. Low-income regions have significant basic gaps in their infrastructure, while low-growth ones often struggle with accessibility. In both types of regions, the innovation systems are underdeveloped and skills gaps undermine competitiveness. This is combined with significant population losses, especially in low-income regions, caused by the out-migration of the younger and more educated members of the population. Low-growth regions, on the other hand, experience a considerable fall in public and private investment.

To overcome these challenges, the report proposes to make use of the [smart specialisation strategies](#); these would enhance the regional innovation systems by improving interactions among businesses and between businesses and higher education institutions. Furthermore, the report proposes ways to invest in human capital, for instance by means of ushering university graduates into the labour market, matching educational supply and labour demand, and encouraging lifelong learning. This should be accompanied by making infrastructure improvements – for instance,

Map 2 – Low-growth and low-income regions



Source: [European Commission](#), 2019.

creating better road networks and linking cities with the surrounding areas – to stimulate spill-over effects from successful cities that function as economic engines. Moreover, the report argues that strengthening institutional capacity and improving the efficiency of public administrations can help increase the transparency and accountability of public services, promote e-government, reduce regulatory burdens, modernise public procurement, support anti-corruption measures and support judicial reform. Lastly, the report proposes to strengthen the link between the European Semester and EU cohesion policy. The positive impact of cohesion policy on small and medium-sized enterprises, skills, transport, social infrastructure, energy efficiency and the environment can be combined with supporting favourable macroeconomic and structural conditions via the EU economic governance frameworks.

A 2018 [study](#) by the European Observation Network for Territorial Development and Cohesion (ESPON) explores the concept of 'inner peripherality' and stresses that 'inner peripheries' are present in almost all European countries. Their general performance, levels of development, access to services of general interest, and quality of life of the population are relatively worse than those of their neighbouring territories. Such inner peripheral areas can include enclaves of low economic potential, areas with poor access to services of general interest, and areas experiencing a lack of relational proximity. A combination of these factors is also possible. Inner peripheries seem to share a perception of 'being forgotten' in the national political agenda. The study proposes to overcome their marginalising effects by establishing cooperation and connectedness across boundaries, and making greater use of national and EU programmes.

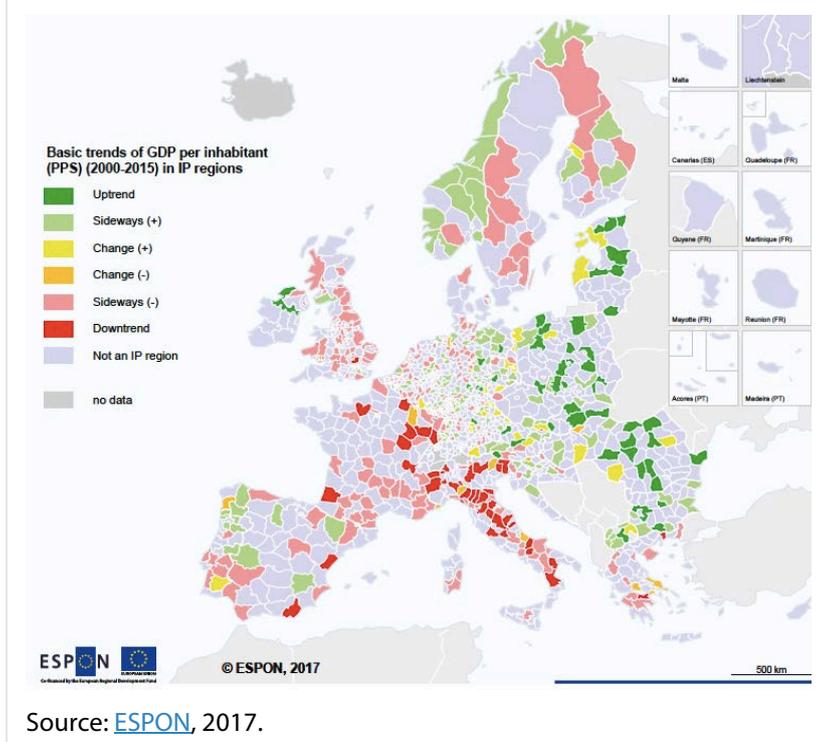
A core aspect identified in the context of inner peripherality is the 'capacity of a territory to connect with its environment'. In addition to geography, such connectedness can be 'relational' and include interactions between local actors, the level of insertion in relevant networks, and the capacity of local institutions, organisations and companies to establish links with other entities in neighbouring territories and beyond. A well-connected territory helps create better conditions of access to services of general interest (SGI) and a more dynamic labour market, capable of retaining a skilled population. This in turn generates opportunities to establish new connections, generating virtuous circles favouring better-connected territories. In contrast, highly 'disconnected' areas tend to reproduce that situation over a longer time.

The study identifies border regions (not only national but also regional) as having a greater incidence of being inner peripheral. Moreover, 80 % of the inner peripheries with low economic potential or poor accessibility are located in non-urban regions. Half of the inner peripheries with

poor accessibility lie in mountainous regions. Areas lacking relational proximity are often located in urban (32.2 %) and metropolitan areas (43 %). Some of their challenges include demographics, that is, decreasing population, increasing old-age dependency and ageing, lower ratios of children and people of working age, but also out-migration of young and skilled members of the population. Inner peripheries also often coincide with regions that are lagging, especially from a national perspective.

The study recommends addressing the connectivity gaps by shortening the travel time to centres of economic activity, reducing travel costs and improving transport connections. It also suggests strengthening the interaction among local players (for instance, via community-led local development strategies) and improving intra-regional service delivery and access, possibly based on innovative IT solutions and investment in digital infrastructure. Moreover, it recommends investing in education, skill development and business support services. The potential of cohesion policy funding combined with funding under other programmes is underlined in this context as a powerful tool to overcome the peripheralisation processes.

Map 3 – Inner peripheries (GDP per capita trends, 2000- 2015)



In addition, a 2018 European Investment Bank (EIB) [paper](#) on 'Inequality in Europe' highlights the quality of policies and reforms in helping reduce inequality and increase inclusiveness. It recommends applying a mix of policies in areas such as economic governance, labour market, education and skills, competition and product market regulation, innovation and entrepreneurship, financial markets, infrastructure and public services, development and urban governance. The role of fiscal policies and welfare systems is also highlighted in this context; however, it is important to keep in mind that taxation and specific social security arrangements fall within the competence of the Member States. The EIB sees the main role of EU funding as one that addresses three dimensions of inequality: geography, education and health.

Equality of opportunity can thus be stimulated by supporting investment in availability and quality of basic services (such as education and health), helping to create favourable business conditions, as well as improving public services provision and infrastructure in the less developed territories.

Outlook

The picture of regional inequalities in the EU is complex. While aggregate disparities between the Member States are decreasing, there seems to be a growing spatial disconnect, with some regions growing dynamically and others stagnating or falling behind. Cohesion policy, alongside economic governance mechanisms, can be used to counteract these phenomena.

GDP per capita is currently the main measure used to assess convergence, as it is believed to provide a good proxy for the standard of living. In order to fully assess the picture of inequalities, other complementary indicators are increasingly becoming available; these allow the monitoring of

various aspects that may impact inequalities (such as access to education, healthcare and infrastructure). In its proposals for the 2021-2027 multiannual financial framework, the European Commission has maintained GDP per capita as the main measure for cohesion policy allocations. However, it has also added several new criteria, including youth unemployment, low education levels, climate change, and the reception and integration of migrants. While this may indicate a shift towards a more comprehensive view of territorial convergence and the adoption of an opportunity-oriented perspective, the final shape of the new regulations remains to be seen in the course of the ongoing negotiations on the post-2020 cohesion policy framework.

MAIN REFERENCES

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[In It Together: Why Less Inequality Benefits All](#), OECD, May 2015.

ENDNOTES

- ¹ Income inequality is understood here as the quintile share ratio (S80/S20). The indicator used in the social scoreboard is based on the EU-SILC data (statistics on income, social inclusion and living conditions).
- ² Atkinson T. (2015) *Inequality: What Can Be Done?*, Harvard University Press, and Piketty, T. (2014), *Capital in the 21st Century*, Belknap Press.
- ³ Other measures, offering more detailed information on inequality and distribution, include the Coefficient of Variation, the Atkinson Index, the Theil Index, the Mean Logarithmic Deviation (MLD) and the Transition Probability Matrix. They use different weighting schemes and may be more sensitive to changes at the lower or upper end of the distribution or around the median.
- ⁴ NUTS (Nomenclature of territorial units for statistics or Nomenclature des Unités territoriales statistiques in French) is a geographical nomenclature subdividing the economic territory of the European Union into regions at three different levels (NUTS 1, 2 and 3 respectively, moving from larger to smaller territorial units).
- ⁵ The Nordic Member States include Denmark, Finland and Sweden.
- ⁶ For a comprehensive overview of EU regional indicators, see A. Widuto, [Beyond GDP: Global and regional development indicators](#), EPRS, European Parliament, 2016.

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