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PART 1/23

COMMISSION STAFF WORKING DOCUMENT
Accompanying the document

Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions

on the 9th Cohesion Report

{COM(2024) 149 final}

1

ECONOMIC COHESION

The 2004 enlargement triggered a remarkable convergence of GDP per head. In central and eastern Europe as a whole, income per head increased from 45 % of the EU average in 1995 to nearly 80 % today. Nevertheless, large differences persist; there is ample room for further upward convergence.

Across the EU, regional disparities narrowed until the financial crisis but then stagnated, mostly because of slower growth of less developed regions in central and eastern Europe and the divergence of some less developed and transition regions, especially in southern Europe.

Around a third of EU regions – less developed, transition, and more developed regions alike – have yet to see a return to 2008 levels of GDP per head. These are primarily in Italy, Spain, Greece and France, but also in Germany, Finland and the Netherlands. This poor performance is due to slowing growth of productivity, investment and employment.

Growth of GDP per head in the EU averaged 1 % a year over the period 2001– 2021, but in many regions it stagnated or even declined. In many cases, stag- nation came along with little or no increase in household income and growing inequalities, fuelling political discontent and a decline in support for democratic values and the EU.

On the positive side, several regions escaped stagnation, using their local strengths to move to more complex economic activities and become integrated into European and global value chains.

The recovery from the COVID-19 pandemic has been faster than after the 2009 recession, partly because of swift EU policy action, with the rapid mobilisation of Cohesion Policy and the adoption of NextGenerationEU. More recently, escalating geopolitical tensions, with war erupting on the EU's doorstep, and the surge in energy, raw materials and food prices have exacted a heavy toll on many EU regions.

Looking ahead, disparities between EU regions and current candidate coun- tries are large but not unlike those between the EU-15 and accession countries in 2004, suggesting that there is a very large untapped potential for further upward convergence.

Chapter 1

Economic cohesion

1. Introduction

Reducing territorial disparities is a cornerstone of European integration, dating back to the Treaty of Rome, which sets the goal of 'reducing the differ- ences existing between the various regions and the backwardness of the less-favoured regions'. Accordingly, Cohesion Policy is not only the most visible expression of EU solidarity but also a cen- tral pillar of its Single Market and growth model[1]. Removing barriers to the free movement of goods, services, capital and workers has promoted a better allocation of resources across the EU and fostered the exchange of ideas and innovation. However, market forces alone do not ensure that everyone benefits from economic integration. By investing in infrastructure, innovation, education and other key areas, Cohesion Policy helps less developed regions directly and all other regions indirectly to reap the benefits and economies of scale created by the Single Market.

This report comes 31 years after the introduction of the EU Single Market, 25 years after the launch of the euro and 20 years after the historic EU east- ern enlargement of 2004. It shows the remarkable economic convergence that eastern regions and countries have achieved since then. GDP per head in central and eastern Europe (shortened to 'east- ern Europe' in this report) increased from around 45 % of the EU's average in 1995 to 52 % at the moment of accession in 2004, to nearly 80 % in 2021. This is an extraordinary achievement of Eu- ropean integration and Cohesion Policy, which has invested nearly EUR 1 trillion to support balanced economic development in the EU since 2000.

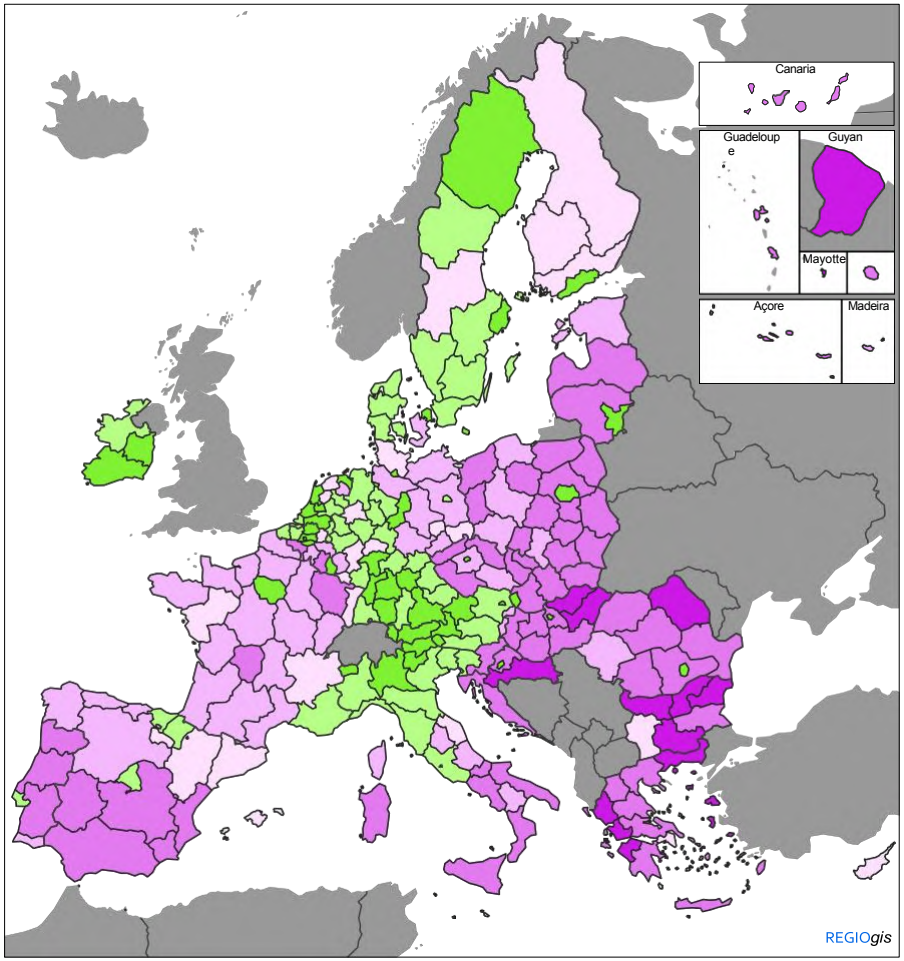
Some parts of Europe, however, have found it more difficult to converge. As indicated in previ- ous reports, GDP per head in some transition and less developed regions began to diverge from the EU average after the 2009 recession, revealing an increased likelihood of falling into what can be termed a 'development trap'[2], with implications for social and territorial cohesion (Chapters 2 and 3).

Most recently, the outbreak of the COVID-19 pan- demic and escalating geopolitical tensions, with war erupting on the EU's doorstep, have tested co- hesion. The disruptions in global supply chains and the surge in energy, raw materials and food prices have exacted a heavy toll on households – espe- cially the most vulnerable ones – and the economy at large. Despite encouraging signs of recovery, the long-term impact of these events on cohesion remains difficult to predict, especially in a context where secular structural challenges linked to the green and digital transitions are set to reshape much of the EU economy (Chapters 4, 5 and 6).

Against this background, this chapter provides an update of the state of economic cohesion in the EU by assessing long-term economic convergence between regions over the past 20–30 years and the short-term impact of the pandemic. Tapping into the growth potential of the 82 regions with GDP per head below 75 % of the EU average is key to fostering convergence and the prosperity of the EU. Accordingly, it indicates how productivity and competitiveness have evolved across regions and how they can contribute to economic cohesion going forward.

1 See Box 1.6.

2 The likelihood of being in a development trap is measured by a composite indicator capturing a protracted period of low or negative growth, weak productivity increases and low employment creation. See: Diemer et al. (2022) and European Commission (2022a).



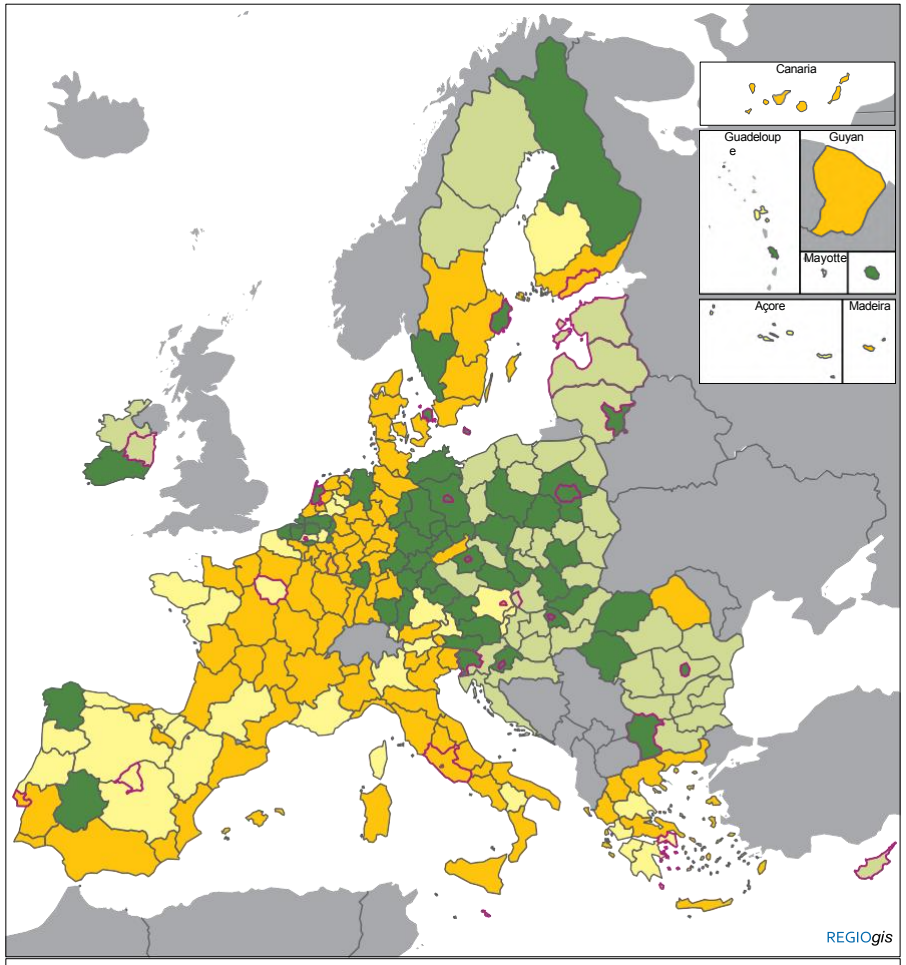
Map 1.1 GDP per head (PPS), 2021

Index, EU-27 = 100

- < 50
- 50 – 75
- 75 – 90
- 90 – 100
- 100 – 125
- >= 125

Source: Eurostat

0 500 km



Map 1.2 Regional growth of GDP per head compared with growth in the EU and Member States, annual average, 2001–2021

Category

- above EU average and above Member State average
- above EU average and below or equal to Member State
- average below EU average and above Member State average
- below EU average and below or equal to Member State average
- no data
- capital regions

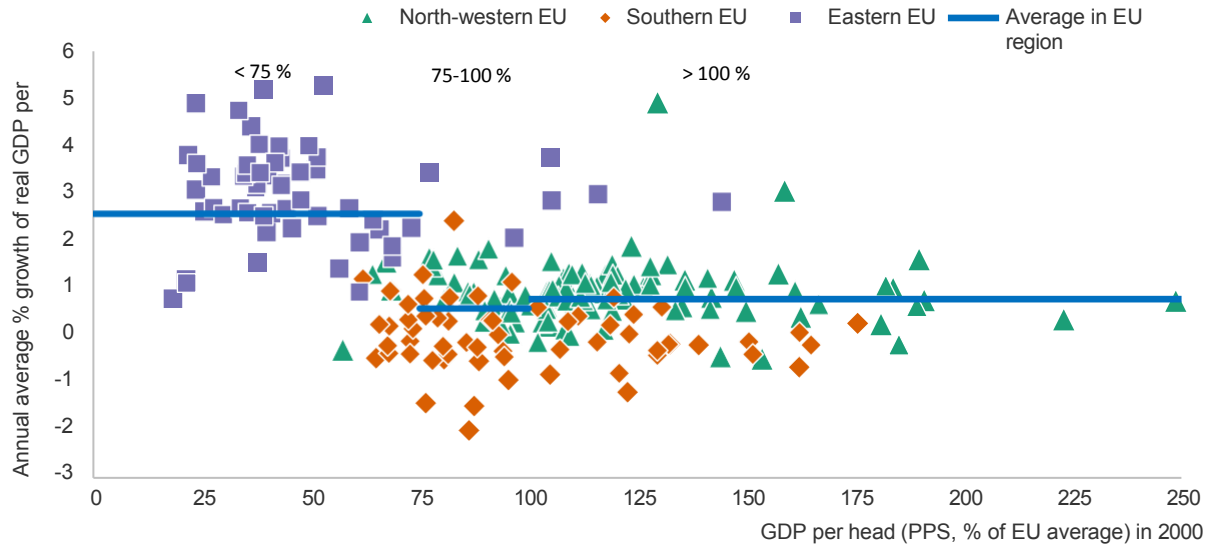
Source: DG REGIO based on JRC annual regional database (ARDECO) data.

0 500 km

2. Long-term trends in convergence and regional economic cohesion

Differences in regional GDP per head in the EU have steadily diminished over the past two dec- ades but there is ample room for further upward convergence[3]. Some 20 years after the 2004 en- largement, the regions then entering the EU have achieved a remarkable economic convergence, with GDP per head in eastern Europe increasing from 50 % of the EU average in 2004 to nearly 80 % in 2021. However, there is still substantial scope for further convergence. Over 1 in 4 people in the EU (28 %) still live in regions with GDP per head below 75 % of the EU average in PPS terms[4], most of them in eastern Member States, but also in outermost regions and increasingly in southern Europe (Map 1.1 and Chapter 3)[5]. In Bulgaria, for instance, GDP per head was below 50 % of the EU average in all regions, except in Yugozapaden, the capital city region. To put this into perspective, differences in GDP per head across US states bot- tom out at about 60 % of the US average and only 1 in 12 people live in a state with GDP per head below 75 % of the US average[6]. This suggests that there is still a large untapped potential for upward convergence in GDP per head – and in living stand- ards – within the EU. Moreover, around a third of EU regions – with a similar share of EU population, around 155 million people in total – have a GDP per head that is yet to return to its 2008 level. These are equally divided between less devel- oped, transition and more developed regions and are present in 12 Member States: Italy (19), Spain (15), Greece (12), France (9), Germany (5), Finland
(4), the Netherlands (4), Portugal (3), Romania (3), Austria (2), Belgium (1) and Luxembourg (1).

Figure 1.1 Annual growth in real GDP per head in EU regions by level of development, 2001–2021



Source: Eurostat [nama_10r_2gdp] and DG REGIO calculations.

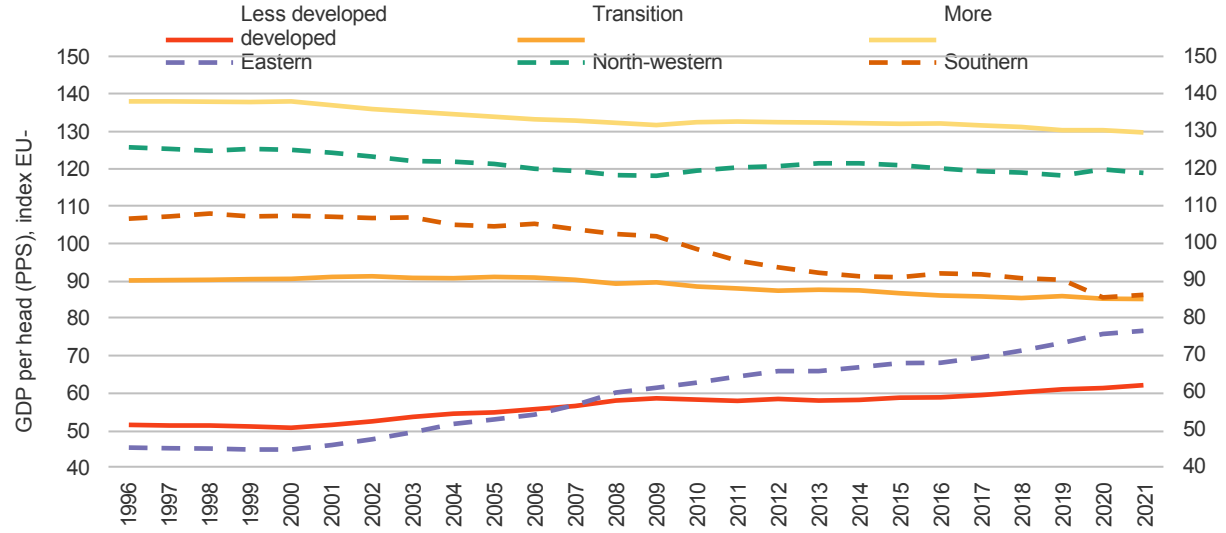
3 European Commission (2023).

4 GDP per head in PPS terms is the total value of goods and services produced per inhabitant adjusted for differences in price levels between countries. Regions here and throughout the chapter are defined at the NUTS 2 level.

5 The EU includes nine outermost regions: Guadeloupe, La Réunion, Mayotte, Guyane, Martinique and Saint-Martin (France), Madeira and Açores (Portugal) and Canarias (Spain). In the outermost region of Mayotte (France), for instance, GDP in PPS was as low as 28 % of the EU average in 2021.

6 Clearly the US is not comparable to the EU in political or historical terms but it remains the most comparable economic area in terms of market size, economic development, geographical area and population. It is therefore a relevant benchmark from an economic cohesion perspective: see Head and Mayer (2021). It should be noted, however, that EU NUTS 2 regions are on average smaller in size than US states, which in itself tends to increase disparities.

Figure 1.2 GDP per head in EU regions, PPS, 1995–2021, % of EU average



Source: Eurostat.

Growth of GDP per head over the past two decades has been robust in eastern regions but subdued in southern and some outermost ones. Over the 2001–2021 period, GDP per head in real terms in- creased in most EU regions, though by only 1 % a year or less in most north-western and southern regions. In line with standard economic conver- gence theory, regions with low levels of GDP per head experienced higher rates of growth on aver- age (Figure 1.1). Per capita growth was particularly high in eastern regions (around 2.5 % a year on average)[7]. There are, however, exceptions. In most regions in Greece and Italy, in particular, GDP per head fell over this period. At the same time, growth was very low in transition regions in France and Spain and negative in a few more developed re- gions in north-western Europe (Figure 1.2). In the recent past, for the first time in the post-war peri- od, nearly 1 in 6 regions in the EU, 39 in total with over 60 million people, experienced two decades in which GDP per head declined[8]. The next section examines convergence dynamics further using a range of statistical indicators.

2.1 Key indicators of economic convergence

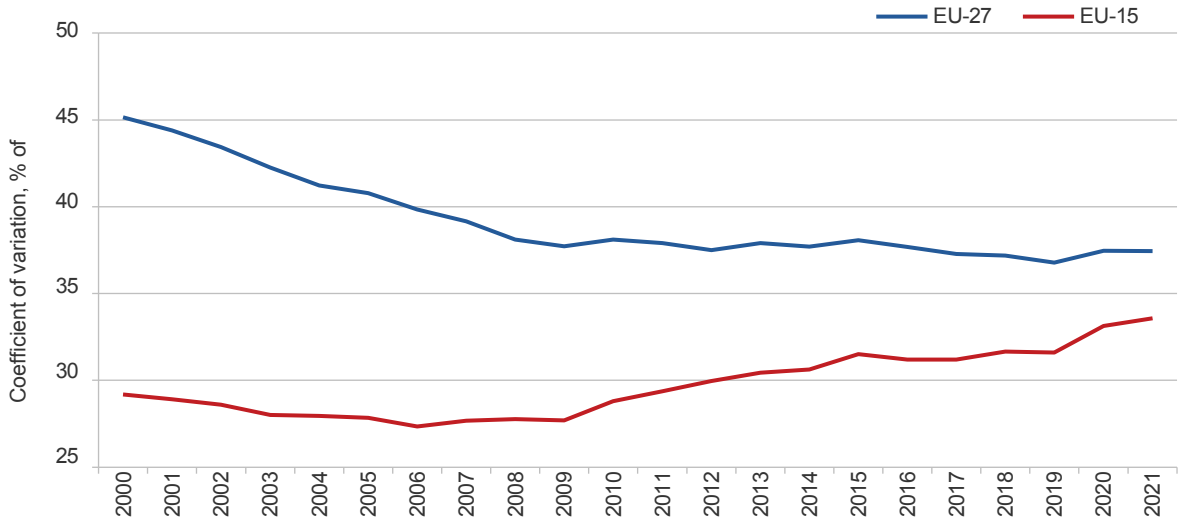
There are important differences in convergence dynamics between the EU-27 and the EU-15 (i.e. the 15 Member States before the 2004 enlarge- ment). A commonly used statistical indicator to as- sess disparities in GDP per head is the coefficient of variation, which is a measure of its dispersion across regions (see Box 1.2)[9]. This indicator shows that disparities in GDP per head across EU regions declined sharply over the period 2000–2021 (Fig- ure 1.3). On the one hand, this was largely driven by strong upward convergence of eastern regions. On the other hand, it is evident that convergence dynamics differ markedly between the EU-27 and the EU-15. In the former, regional disparities de- clined up until 2009 and stabilised afterwards.

7 Many of the eastern Member States have witnessed significant outmigration during the past two decades, thereby lowering the denomina- tor. This trend is of great social and economic importance and is analysed more in detail in Chapter 6. However, the results of exceptional economic convergence are confirmed when measured in terms of productivity or GDP per person employed (see Section 2), a measure that is not affected by net migration. It is also confirmed by indicators of household disposable income and investment. Despite the enormous progress made, this report shows that there remains ample room for forward upward convergence, and a large heterogeneity of income within countries and among households.

8 18 of the regions are in Italy, nine in Greece, four in Spain, three in France and one each in Portugal, Finland, Austria and Belgium. From 2010 to 2021, GDP also fell significantly in some outermost regions – in Canarias from 83 % of the EU average to 62 %; in the Açores from 75 % to 66 %; and in Madeira from 81 % to 70 % (Eurostat).

9 The coefficient of variation is a way of quantifying the variability of a dataset in relation to its mean. It is calculated by dividing the standard deviation by the mean and then expressing this as a percentage, allowing for comparisons between datasets with different units or scales.

Figure 1.3 Regional (NUTS 2) disparities, EU-27 and EU-15, GDP per head (PPS)

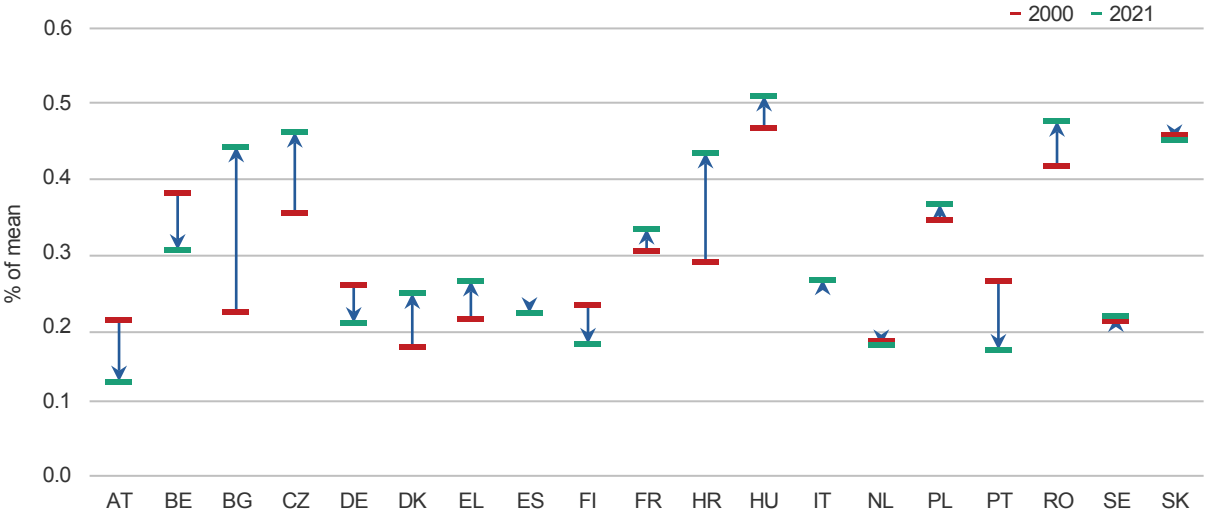


Source: DG REGIO calculations based on Eurostat data.

In the EU-15, disparities declined up until 2006 and at a much slower pace and began to increase af- ter 2009. The coefficient of variation indicates that regional disparities in the EU-27 were still some 30 % larger in 2021 than those in the EU-15 in 2004, suggesting that ample room for upward con- vergence remains.

Regional disparities are wide in many Member States and have tended to widen further in most of them since 2000 (see also Chapters 2 and 3). In Member States with more than four regions, regional disparities in GDP per head increased in 11 of the 19 Member States concerned between 2000 and 2021 (Figure 1.4). Increases were larg- est in Bulgaria, Croatia and Czechia, but there were also increases in the EU-15, in Denmark, Greece and France. On the other hand, disparities declined in Portugal, Austria, Belgium and Germany. The drivers of within-country regional disparities are

Figure 1.4 Coefficient of variation within Member States, GDP per head (PPS), NUTS 2 regions, 2000 and 2021



Source: DG REGIO calculations based on Eurostat data.

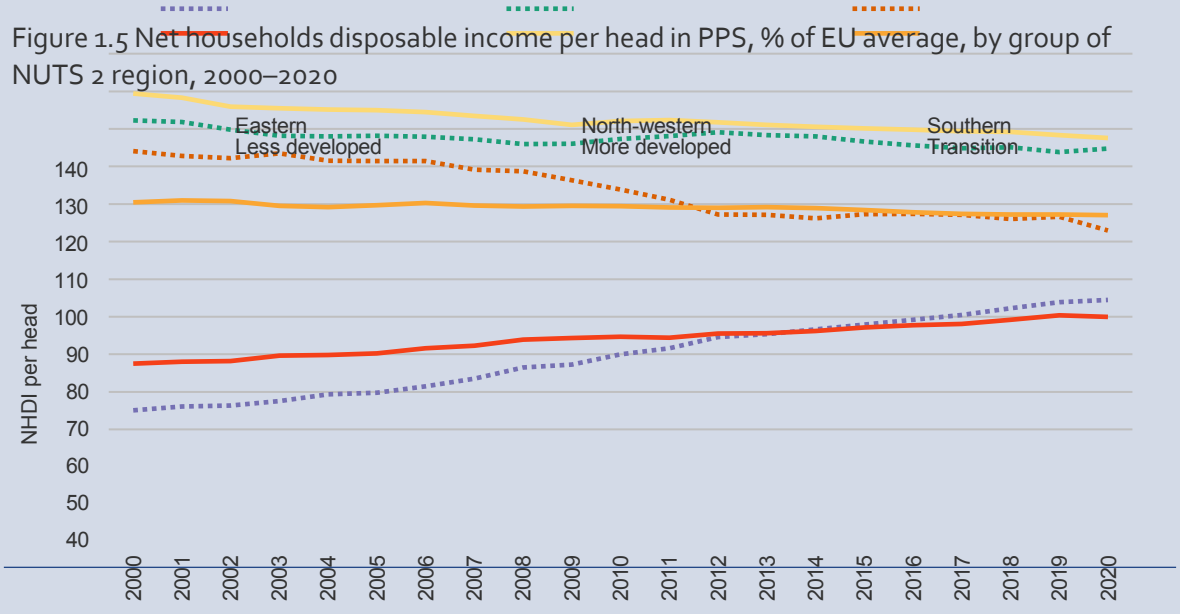
Box 1.1 Household disposable income and economic cohesion

Household income per head can be used to show how convergence in GDP per head is reflected in people's income (Figure 1.5). As for GDP per head, there are large regional differences in growth rates of household income. Net household disposable in- come (NHDI) per head relative to the EU average increased steadily between 2000 and 2020 in eastern regions (from 45 % to 75 %) and, to a lesser extent, in less developed regions as a whole (from 60 % to 70 %). On the other hand, it declined substantially in southern regions between 2000 and 2012 (from 115 % to below 100 %) and remained unchanged up until 2020, when it fell (to 95 %) because of the ef- fect on their economies of the COVID-19 pandemic.

GDP and household income per head are key indi- cators for assessing economic convergence and dis- parities across regions, but do not shed light on the extent to which the benefits of growth are shared among people within regions. There were large re- gional differences in growth rates of mean equivalised household income across the EU (Figure 1.6).

Over this period, two thirds of regions experienced growth in mean household income, whereas the rest registered no growth or a decline. Many of the high- growth regions are in eastern Europe, while many of those with no growth or a decline are in southern Europe. However, a number of advanced economies from north-western Europe (France, Austria, Bel- gium and Denmark) also saw mean household in- come stagnate during this period. The largest differ- ences in growth rates occur between and not within countries. An exception is France, with some regions experiencing sustained growth and others a decline, including some of the outermost regions[1]. Moving beyond average income, the European Commission found that high-income households in the EU have benefited most from income growth in countries where growth was above the EU average over the period 2007–2017 (largely catching-up countries)[2]. Conversely, in countries where income declined, the decline was more equally distributed.

Figure 1.5 Net households disposable income per head in PPS, % of EU average, by group of NUTS 2 region, 2000–2020

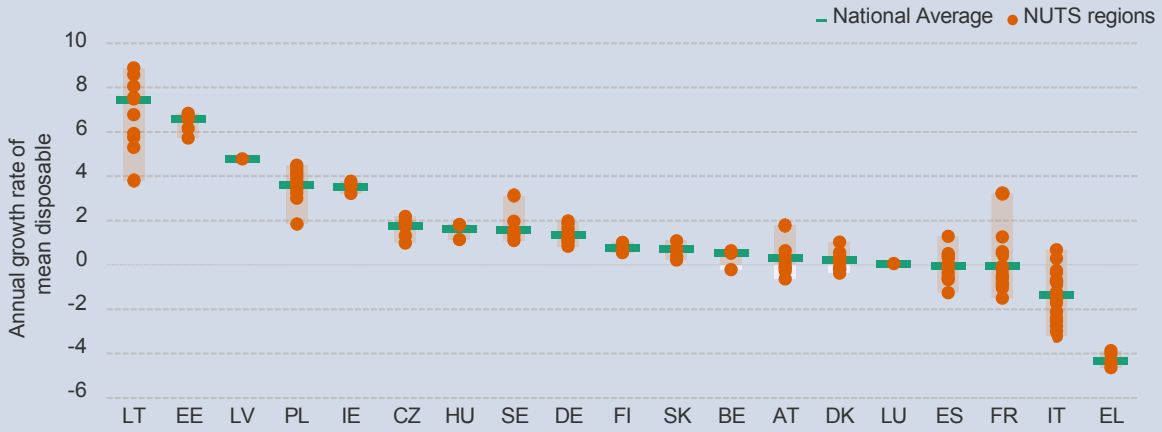


Source: Eurostat.

1 Significant differences in disposable income persist between some French outermost regions and mainland regions. In Mayotte, the yearly median disposable income was EUR 3 140 in 2019, far below the national average of EUR 21 680.

2 European Commission (2020).

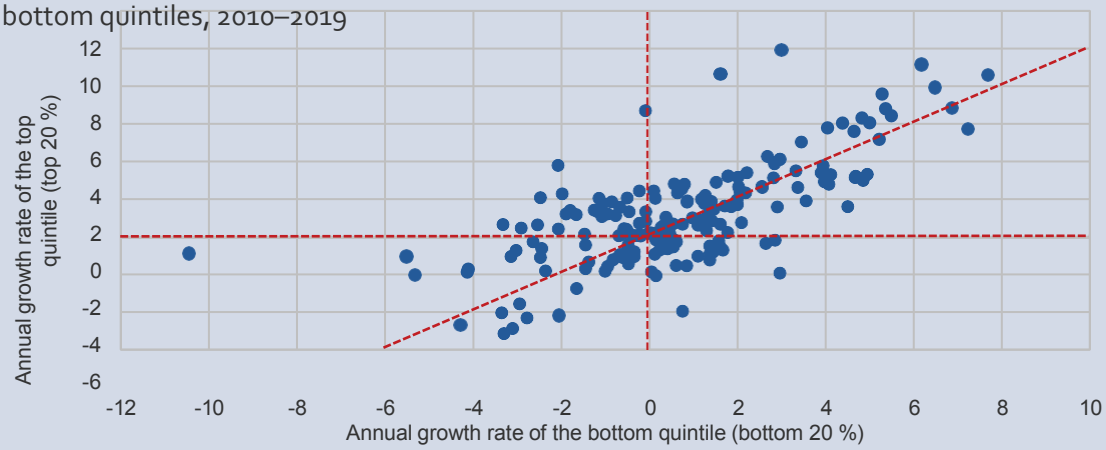
Figure 1.6 Growth in mean equivalised disposable household income, 2010–2019



Note: NUTS 3 regions for DK, EE, LT, and SK, NUTS 2 regions for AT, CZ, ES, FI, FR, IE, LU, LV, and PL, and NUTS 1 for the remaining countries. Households are defined as one or more persons living in the same dwelling. Disposable income is defined after taxes and transfers. This is equivalised by dividing the total disposable income of the household by the square root of the number
of household members.
Sources: OECD computations based on microdata from the Luxembourg Income Study (LIS) and EU Statistics on Income and Living Conditions (EU-SILC).

Survey-based data shed light on the distribution of regional income between households. Inequali- ties tend to be persistent and high in EU regions[3]. The top 20 % of households in EU regions, in terms of income, received on average almost 5 times (4.7) more than the bottom 20 % in 2019, an in- crease of 5 % from 2010. However, increased in- equality was not common to all regions. Only in a small majority of regions (54 %) did top incomes grow more, or decline less, than bottom incomes, and in the rest income inequality narrowed (Fig- ure 1.7). In regions with increasing household in- come inequality, this was driven by low-income households becoming poorer rather than high-in- come ones becoming richer.

Figure 1.7 Growth in mean equivalised disposable household income for the top and bottom quintiles, 2010–2019



Note: NUTS 3 regions for DK, EE, LT, and SK, NUTS 2 regions for AT, CZ, ES, FI, FR, IE, LU, LV, and PL, and NUTS 1 for the remaining countries. Households are defined as one or more persons living in the same dwelling. Disposable income is defined after taxes and transfers. This is equivalised by dividing the total disposable income of the household by the square root of the number
of household members.
Sources: OECD computations based on microdata from the Luxembourg Income Study (LIS) and EU Statistics on Income and Living Conditions (EU-SILC).

3 OECD (2022).

These results indicate the importance of regional ly, persistent or expanding pockets of poverty and social exclusion can limit opportunities for people, so reducing the growth potential of regions, through lower employment rates. Thirdly, if growing inequalities are compounded by a broader worsening in living standards, this can lead to discontent, and a decline in regional cohesion and a more polarised political landscape[5].

suffered most from recessions or shocks. Second- statistics on income distribution and the need to ex- tend their coverage. This can be achieved by using additional sources of data to measure inequalities more accurately and at more detailed spatial levels[4]. Making progress on this is important for several reasons. Firstly, it would help to throw further light on categories of people in particular places that have benefited most from regional convergence or

4 E.g. Königs et al. (forthcoming); Bauluz et al. (2023).

5 Dijkstra et al. (2020); 2023; Rodríguez Pose (2018); Lee et al. (2023).

quite heterogeneous across Member States. More developed regions (typically capital city regions) are generally widely outperforming other regions in eastern Member States such as Bulgaria or Romania. In other Member States, such as Portugal, the decline in regional disparities is due to low growth in some developed, previously dynamic, regions. In France, instead, internal disparities increased because growth of GDP per head in regions with low levels was particularly slow. Differences in GDP per head within Member States are often as large as between Member States, indicating that important regional variations are often hidden by national averages. The same holds for disparities in employment rates and in a number of social indicators, including between rural and urban areas (Chapters 2 and 3)[10]. Convergence trends in household disposable income show some similarities with those of GDP per head but also differences (see Box 1.1).

GDP per head in less developed regions grew, on average, faster than in other regions before the 2009 recession but not after it. Another widely used indicator of convergence is the beta coefficient (see Box 1.2), which shows the tendency for lower-income economies or regions to grow faster than higher-income ones, narrowing disparities over time. As seen above, this has indeed happened since 2000, especially among less developed regions in eastern Europe. However, in the EU-15, though regions with lower GDP per head grew faster than those with higher levels over the 12 years 1996–2008, their growth was lower in the 12 years 2009–2021[11]. The estimated beta coefficient of convergence indeed turned from negative (Figure 1.8) to positive after the global recession (Figure 1.9). In the EU-12 (those before 1995), GDP per head in lower-income regions grew faster than in higher-income ones throughout the period, but not to the same extent after the global recession. The estimated beta coefficient, indeed, remained negative, as expected, but declined by a third[12]. This tendency is consistent with a larger fall than elsewhere in investment and total factor productivity in many of the countries concerned after the global recession[13].

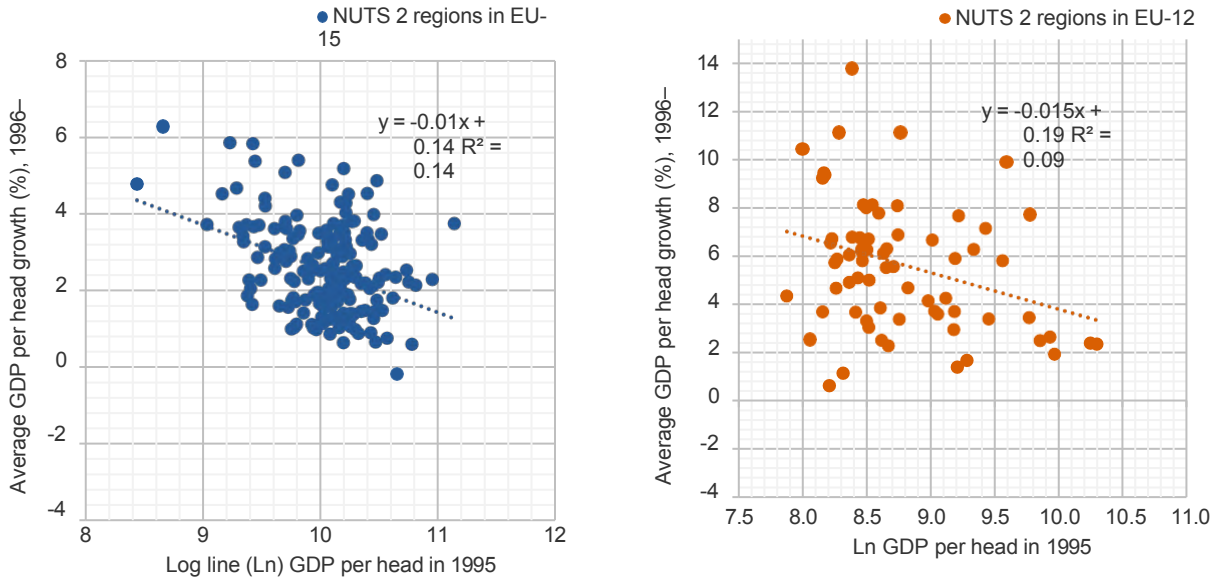
10 Participation rates, for instance, are very high in some Member States (e.g. 82 % in the Netherlands, and almost 90 % in Åland in Finland), but much lower in Greece (63 %), as low as 44 % in Sicilia, and under 40 % in Mayotte.

11 The beta coefficient remained more stable in the NUTS 2 regions in the EU-12. As expected with logarithmic functional forms and standard economic theory, it flattened slightly over time, reflecting assumed decreasing returns to scale and a slowdown in the pace of convergence the closer a region gets to the technological frontier.

12 A significant decline is also found for other estimates of the beta coefficient over time (through rolling regressions) for the EU as a whole. See: Monfort (2020).

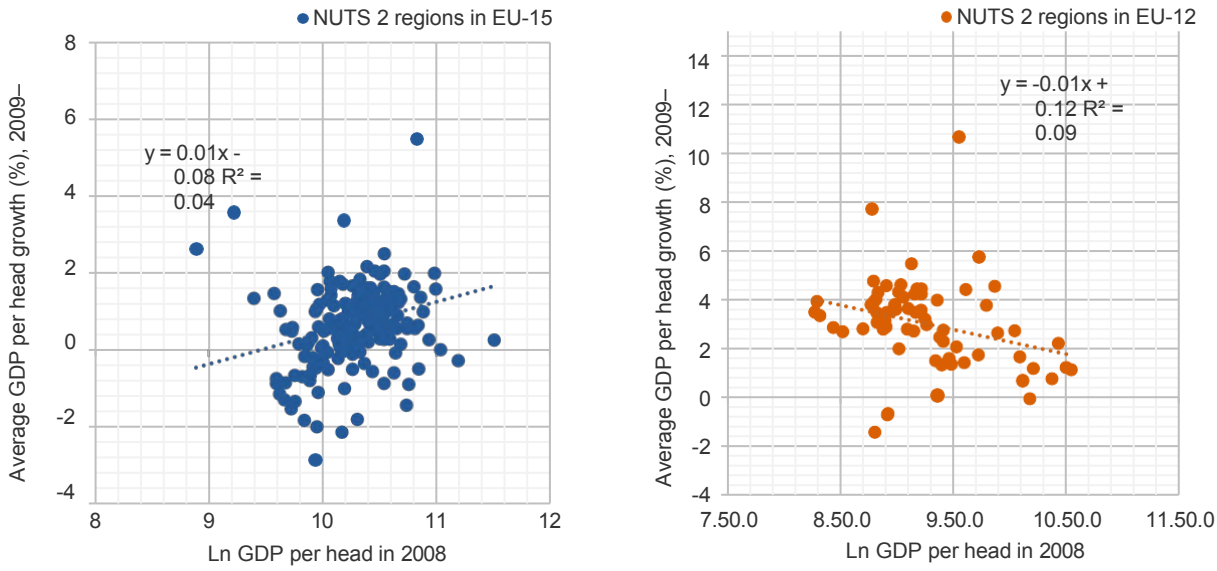
13 Through an analysis of conditional beta convergence (see Box 1.2), Licchetta and Mattozzi (2022) find that limited productivity catch-up is a major explanation for the lack of convergence, especially of southern regions. However, they also note that capital accumulation was particularly sluggish in the euro area in the decade following the global recession and gross fixed capital formation (GFCF) took 10 years to return to its pre-recession level. This was in sharp contrast to the period before 2008, where growth in GFCF was higher than average in many euro area converging countries, although largely (and arguably excessively) concentrated in the construction sector, where it declined markedly afterwards.

Figure 1.8 Estimated beta-coefficient for NUTS 2 regions in the EU-15 and EU-12, 1996–2008



Source: DG REGIO calculations based on Ardeco data.

Figure 1.9 Estimated beta-coefficient for NUTS 2 regions in the EU-15 and EU-12, 2009–2021



Source: DG REGIO calculations based on Ardeco data.

Differences in economic structure and geograph- ical features can partly explain differences in the pace of convergence. A recent statistical approach is built around the notion of 'club convergence'[14].

The clubs or clusters concerned may have a com- mon economic structure, geographical features or other characteristics that affect the pace of con- vergence. One study[15] employs this approach to

14 In this context, measures of club convergence, such as pair-wise statistical convergence, enable convergence, or divergence, to be exam- ined between pairs of countries or regions, rather than examining entire groups simultaneously as with sigma and beta convergence: see Pesaran (2007). The measure, therefore, complements these more traditional indicators by allowing for the identification of patterns of convergence within the sample analysed.

15 Arvanitopoulos and Lazarou (2023).

Box 1.2 Three indicators of statistical convergence: sigma, beta and club convergence

These three concepts are often used in empirical research to assess dynamics of economic develop- ment and convergence among different countries or regions and to explore whether disparities are di- minishing, how fast convergence is occurring, and whether different types of economies exhibit differ- ent convergence patterns.

Sigma (σ) convergence

Sigma convergence refers to a situation where the dispersion or inequality of income, or other indi- cators, between countries or regions declines over time. Accordingly, it indicates that the standard devi- ation – a measure of dispersion around the mean – is narrowing, pointing to a reduction in disparities. In this report, the coefficient of variation, which ex- presses the standard deviation as a percentage of the mean, is used to examine the presence of sigma convergence.

Beta (β) convergence

Beta convergence is an indicator of the rate at which different economies are approaching a common 'steady state' of economic development or income[1]. It shows whether lower-income countries or regions grow at a faster pace than higher-income ones, leading to a reduction in disparities between them. A related concept is that of conditional beta conver- gence, as used, for instance, in the study by Licchet- ta and Mattozzi referenced above. This starts from beta convergence but enables account to be taken of the influence of specific conditions or features on the rate of convergence in addition to initial levels of GDP per head. Conditional beta convergence al- lows for a more nuanced analysis of convergence dynamics by recognising that factors such as invest- ment, education or governance can also affect the rate at which economies catch up with others.

Club convergence

Club convergence refers to the notion that groups or 'clubs' of countries or regions may exhibit dis- tinct patterns of economic convergence[2]. These may have a common economic structure, geographical features or other characteristics that can at least partly explain different paces of convergence. Within this, pair-wise statistical convergence is a method that assesses the convergence or divergence be- tween pairs of countries or regions, rather than look- ing at entire groups simultaneously as with sigma and beta convergence[3]. The method is often used to identify and analyse distinct groups of economies that exhibit similar convergence patterns (club con- vergence). It allows researchers to determine which countries or regions are moving closer together and which are not, so increasing understanding of dif- ferences in convergence patterns within a broad- er group of economies. Overall, the results for EU regions found by Arvanitopoulos and Lazarou are broadly in line with those obtained by Pesaran for the world economy. While technological progress seems to have been spreading reasonably widely across economies, there are important geographical and structural factors that mean there are differ- ences in GDP per head that remain persistent.

1 Barro and Sala-i-Martin (1992).

2 Quah (1996).

3 Pesaran (2007).