

#### 4.3. CONVERGENCE OF NEW MEMBER STATES ON THE 20TH ANNIVERSARY OF THE 2004 ENLARGEMENT

**Twenty years ago, on 1 May 2004, 10 new countries joined the EU.** This fifth enlargement of the EU was the biggest ever in terms of number of acceding countries and population. It was also a very challenging one given the large income difference between the “old” Member States, excluding the UK (henceforth referred to EU14), and the “new” Member States (henceforth referred to as NMS10). This enlargement was also special in that it brought together countries with very diverse economic, social and political backgrounds – ranging from three former Soviet republics (Estonia, Latvia and Lithuania), four former satellites of the USSR (Poland, the Czech Republic, Hungary and Slovakia), a former Yugoslav republic (Slovenia) and two Mediterranean islands (Cyprus and Malta). Their institutional structures, including legal systems, governance practices and economic frameworks, varied within the group, but also differed significantly from those of the EU14, which can be characterised as western European democracies with market economies.

**This special topic takes stock of the achievements of the economic convergence process by the new Member States and assesses the prospects of further convergence ahead.**

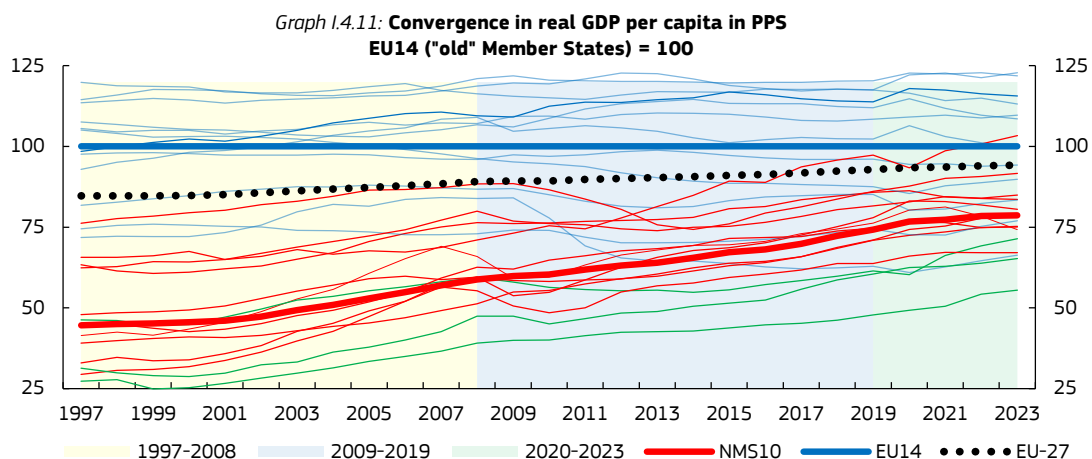
The driving force behind the fifth EU enlargement was the desire to ensure peace, stability and economic prosperity in a re-unified Europe. This special topic focuses on the latter by examining the extent to which enlargement has succeeded in raising the living standards of the citizens of the new Member States to those of the old members. The analysis is based on estimates of potential output to understand the path and structural drivers of the convergence process. Using the official Commission’s projections of potential output 10 years ahead (EUCAM) it also sheds light on the prospects of convergence in the next decade. In particular, the dynamics of convergence are analysed over four intuitive sub-periods: (1) the accession period covering 1997-2008, (2) the intra-crisis period covering 2009-2019, (3) the post-pandemic period covering 2020-2023 and (4) the decade ahead 2024-2033<sup>(80)</sup>.

##### Evidence of income convergence

**Since the beginning of the accession process, the catch-up in real incomes by the acceding Member States has been impressive.** While the paths of individual countries have differed, average income per capita in the 2004 enlargement group has been catching up steadily, year after year, towards the average level of “old” Member States (see Graph I.4.11). The enlargement process, formally launched in 1997<sup>(81)</sup>, allowed the then-candidate countries to already benefit from access to the EU market and financial assistance for developing their economies, institutions and infrastructure. Expressed in purchasing power standards (PPS), GDP per capita of the NMS10 increased from 45% of the EU14 in 1997 to 51% in 2004, at the time of accession, and continued edging up to reach 79% in 2023. Importantly, the convergence process has been uninterrupted and resilient to the major crises that hit the EU in the past 20 years: the Great Financial Crisis, the sovereign debt crisis, the COVID-19 pandemic and the energy crisis. The *pace of convergence*, measured by the speed with which the average income per capita (PPS adjusted) in new Member States approaches the average of the old Member States, has been relatively stable over the past three decades. It averaged 1.3 pps. per year in the accession period, 1.4 pps. in the intra-crisis period, before slowing slightly to 1.1 pps. in the post-pandemic period. However, in the first half of the intra-crisis period the robust pace of convergence must be assessed against the outright contraction in per-capita income in EU14, battered by the Great Financial and sovereign debt crises.

<sup>(80)</sup> This division is also supported by econometric evidence, based on the statistically optimal time location of breaks in the intercept and/or slope coefficients in regressions of growth on past levels of income per capita. For the type of tests used see Bai, J. and P. Perron. (1998). “Estimating and Testing Linear Models with Multiple Structural Changes,” *Econometrica*, 66, 47–78.

<sup>(81)</sup> The enlargement process was launched by the Luxembourg European Council of 12 and 13 December 1997.



*Note: Convergence paths of individual countries in blue (EU14), red (NMS10), green (BG, RO, HR), LU and IE not shown due to outlier values, but included in EU14 and EU27 aggregates, GDP at 2015 reference levels.*

**There is a vast body of empirical studies examining the convergence process in the EU.** It is beyond the scope of this special topic to provide an extensive literature review, but many of these studies have shown the importance of structural and institutional characteristics in driving the economic convergence of individual Member States. Beyond quantifying the contribution of traditional drivers of economic growth, such as capital and labour inputs, they have highlighted the positive role of factors generally associated with higher productivity growth, including improvements in education, investment in R&D and foreign direct investment. Institutional features related for example to the regulatory environment, enforcement of contracts and administrative capacity have also been shown to affect the pace of convergence<sup>(82)</sup>. The benefit of this approach is that it identifies structural drivers that affect productivity and hence growth dynamics. In contrast, these analyses are not designed to assess the prospects of convergence, to the extent that they do not attempt to foresee how the relevant structural characteristics evolve over time.

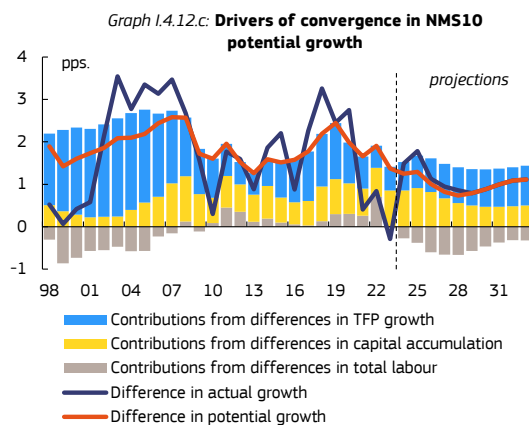
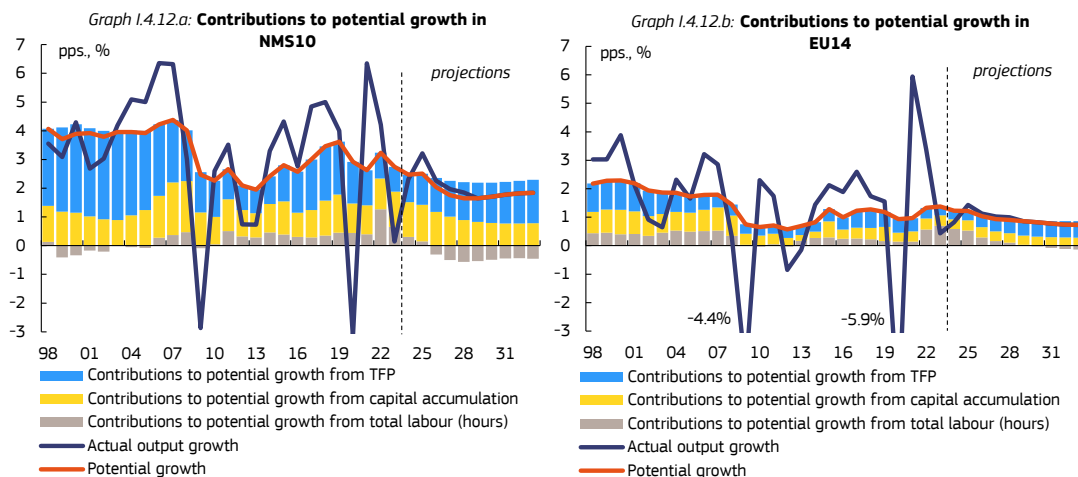
**This analysis looks at the shrinking income gap between old and new Member States through the lens of potential output.** By doing so, this special topic takes a broader, macroeconomic perspective of the process of convergence. Focusing on potential growth also allows filtering out short-term cyclical variations and the impact of other short-term shocks. Potential growth can also be decomposed into the (measurable) contributions from labour and capital and (residual) total factor productivity (TFP). Moreover, by relying on demographic and, more generally, labour market projections and by estimating a law of motion for capital deepening, it allows to formulate plausible projections of the process of economic convergence. A main drawback of this approach is that since total factor productivity is obtained as a residual of the production function, it is silent about the underlying drivers of productive efficiency – i.e. the main source of long-term growth. In this sense, some of the above-mentioned studies can usefully complement the analysis carried out in what follows.

**This analysis relies on DG ECFIN's official estimates of potential output.** There are several approaches to estimate potential output. Given its centrality in multilateral fiscal surveillance, the EU's estimates are subject to a high degree of scrutiny. The methodology is not only scientifically robust, but also fully transparent and well-codified in the so-called Commonly Agreed Methodology (EUCAM). EUCAM is an economics-based methodology – i.e. a Solow growth model with a Cobb-Douglas production function that assumes constant returns to scale to labour and capital; a factor price elasticity equal to one; and factor elasticities equal to their factor shares. The methodology also sets out assumptions underpinning the extrapolation of labour, capital and TFP contributions over the period T+10. Specifically, demographic dynamics are based on Eurostat official

<sup>(82)</sup> For recent empirical evidence and literature review, see, for example, Licchetta M. and G. Matozzi. (2023), "Convergence in GDP per Capita in the Euro Area and the EU at the Time of COVID-19." *Intereconomics* 58.

projections. The projection of the hours worked per employed person is based on the smoothing of the autoregressive-based estimates of the actual series and rules about its stabilisation in the medium and long term. For the trend participation rates, a smoothed autoregressive process is also applied, followed by a convergence rule to the participation rates of the Ageing Working Group's (AWG's) Cohort Simulation Model. The projection for the NAWRU is characterized by the application of a Kalman filter in the short term, and by the later convergence to estimated country specific NAWRU anchors in the medium term. The law of motion of capital accumulation is based on autoregressive estimation of investment on capital intensity and the application of either investment or capital rules. The procyclical nature of the TFP residual is explicitly recognised by modelling it as a function of a cyclical and trend component. The latter is used to project TFP growth in the future <sup>(83)</sup>.

**Since accession, new Member States have featured significantly higher potential output growth than old Member States.** Looking back, potential growth in the NMS10 averaged around 4% in the accession period, but slowed down to below 3% in the intra-crisis period and the post-pandemic periods, to then ease further to around 2% in the decade ahead (see Graph I.4.12). This is still roughly double the potential growth in EU14 in all periods, which drove convergence in income levels over each of the 4 periods (see Graph I.4.12.c).



Note: Stacked bars refer to differences in respective contributions to potential growth in NMS10 and EU14.

<sup>(83)</sup> For more information, see [EUCAM](#).

**Total factor productivity accounts for the largest share of the potential growth differential, but its contribution has been uneven over the past two decades.** The slowdown in potential growth by the NMS10 during the intra-crisis period was due to the halving of the contribution from TFP growth, which broadly reflected the fallout from the global financial and sovereign debt crisis. The recovery over the course of the intra-crisis period in both NMS10 and EU14 was again interrupted by the pandemic. The projection of TFP growth over the coming 10 years suggests a mild upward trend, particularly in the latter part of the forecast period. Despite these fluctuations, contributions from TFP in NMS10 have remained markedly (2-3 times) above those in EU14, thus continuing to be a steady source of convergence in potential GDP (see Graph I.4.12.c).

**Capital deepening has also been a powerful driver of convergence.** The contributions from capital fluctuated somewhat over the entire period and do not show a steady trend, with the exception of an increase in the run-up to the Global Financial Crisis and a subsequent correction, as well as a mild decline projected in the decade ahead. In levels, the contribution from capital deepening to potential growth in NMS10 has remained roughly double of that in EU14. This confirms that capital inflows, including from “old” to “new” Member States, have contributed to driving convergence in potential GDP in all four periods.

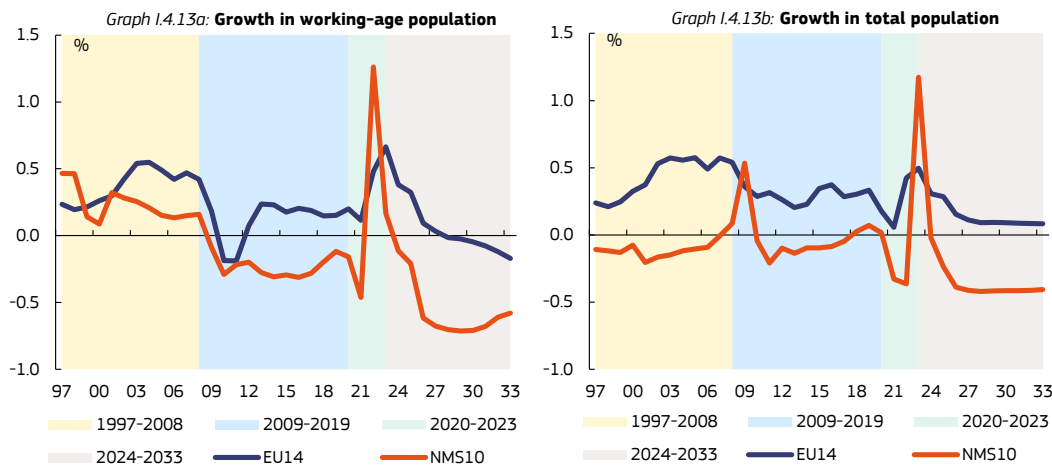
**The contribution from labour, in contrast, has generally been more negative in New Member States...** Following relative stabilisation of the contribution from TFP after the global financial crisis, movements in potential growth reflect primarily the contributions from labour. Notably, the sharp slowdown in potential growth in both EU14 and NMS10 projected in the decade ahead owes largely to the decline in contributions from labour. This is particularly true for NMS10, where, in a sharp turnaround from the strong positive role played in the 2022-24 period, labour is set to detract from potential growth as from 2026. In EU14 the contribution from labour follows a similar path, but less pronounced, with contributions moderating from strongly positive (2022-26) to neutral (2029-30), before turning negative as from 2031. While the figures for the 2020-23 period (and 2022 in particular) are affected by the inflow of persons fleeing the war in Ukraine – a phenomenon that is more pronounced in the NMS10 – the decline in the contribution from labour is also well visible if compared to prior periods, particularly vis-à-vis the intra-crisis period. Consequently, generally lower contributions from labour in NMS10 as compared to EU14 make labour a factor of *divergence* rather than convergence during most of the period under investigation, including in the decade ahead (see Graph I.4.12.c).

**... driven by worsening dynamics in working-age population due to both adverse natural population trends and migration.** The progressive deterioration in the contribution from labour in EU14 and NMS10 has been driven by negative dynamics in working-age population (Graph I.4.13). These, in turn, reflect a combination of demographic trends and net migration – unique for both country groups. In EU14, the working-age population grew by a robust 0.4% in the accession period, benefiting, amongst other things, from intra-EU migration as restrictions on the free movement of workers were first lifted by Ireland and Sweden (as well as by the UK <sup>(84)</sup>, and subsequently by other EU14 Member States. It then slowed sharply to around 0.1% in the intra-crisis period, and is projected to fall to 0% over 2027-30 and -0.1% on average in 2031-33, also reflecting the progressive ageing of the population. Working-age population trends look considerably worse in NMS10, with growth in working-age population well below that of EU14 for most of the past 3 decades. This primarily reflects significantly more adverse demographic trends, including negative population growth, present in most NMS10 already well before the accession <sup>(85)</sup> (see Graph I.4.13.b). In the decade following the enlargement, this was exacerbated by the large migration outflows of workers to Western Europe – a mirror image of improvements in EU14 Member States. The trend has been deteriorating since, under the impact of the ageing of

<sup>(84)</sup> The UK (not part of the EU14 aggregate) along with Ireland, benefited from the largest inflows.

<sup>(85)</sup> Total population had contracted at a rate of 0.1% per annum already in the decade of 1990s, and the trend continued in the accession period, to deteriorate progressively in subsequent periods, notwithstanding a short-lived rebound in 2009 (likely due to a partial return of workers from western Europe after the GFC) and 2022 (due to the inflow of persons fleeing the war in Ukraine).

population, notwithstanding a one-off surge in 2022-23 <sup>(86)</sup> due to the inflow of persons fleeing the war in Ukraine. Growth in working-age population is projected to continue deteriorating, reaching -0.7% over 2027-3031 and improving only marginally thereafter.



**Intra-EU flows of labour and capital over the last two decades reflect productive reallocation of both inputs.** While the outflow of workers from NMS10 to EU14 amplified adverse demographic trends in the former group, it also reflected a natural process of reallocation of a scarce resource to more productive uses. Similarly, in a healthy sign of resources moving across the EU in pursuit of higher returns, capital inflows from the “old” to the “new” Member States accelerated capital deepening in the latter and contributed steadily to closing income gaps. Overall, the free movement of workers and capital retains a key role to play in realising the full benefits of an integrated economic area like the EU.

### Convergence prospects

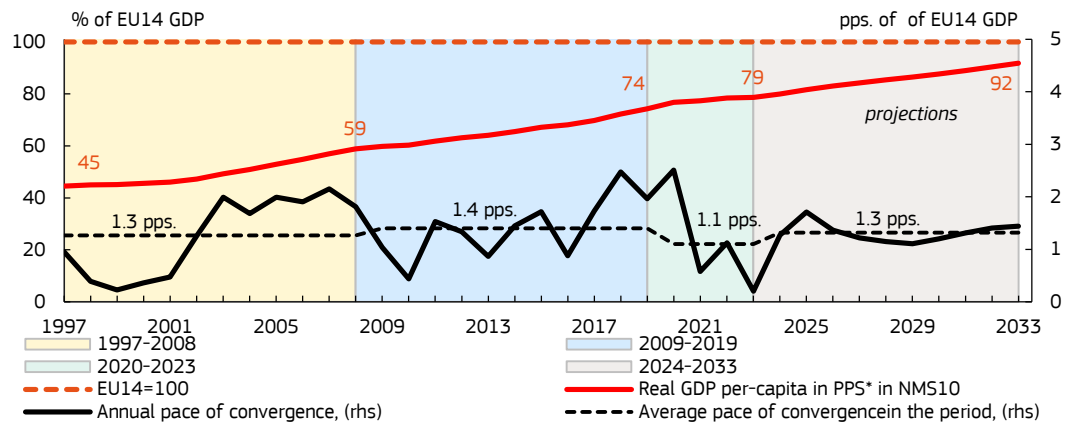
#### **TFP and capital accumulation are set to drive further convergence in the next 10 years.**

Despite the negative contributions from labour, the rebound in TFP together with persistently higher contributions from capital accumulation (see Graph I.4.12.a) should ensure growth differentials in favour of NMS10 over the next decade (see Graph I.4.12.c). With GDP growth in NMS10 exceeding that in EU14 by around 1 pp. in the decade ahead (see Graph I.4.12.c), the process of convergence is set to continue. The more *negative* demographic outlook in the NMS10 (see Graph I.4.13.b) actually *improves* convergence prospects in per-capita terms, widening slightly the per-capita growth gap in favour of NMS10 <sup>(87)</sup>. The resulting pace of convergence in the projection period (1.3 pps. per annum) thus matches that in the accession period. This allows the NMS10 to narrow the income gap with EU14 by a further 13 pps., with NMS10 real GDP per-capita rising from 79%, compared to that in EU14, in 2023 to 92% in 2033 (see Graph I.4.14). Looking ahead, if growth differentials are extrapolated beyond 2033 (the T+10 horizon of the EUCAM projections), it would take the NMS10 another 6 years to close the gap completely.

<sup>(86)</sup> Population statistics in the recent period (2022-23) may suffer from different timing and scope of inclusion of persons from Ukraine fleeing the war in official population statistics across Member States. The resulting dynamics of total and working-age population and ensuing difference between the two country groups thus has to be treated with caution.

<sup>(87)</sup> Convergence in the projection period estimated using Spring Forecast GDP growth for 2024-25, and EUCAM-projections-based per-capita growth gaps over 2026-33.

Graph I.4.14: Convergence in real per-capita incomes of NMS10

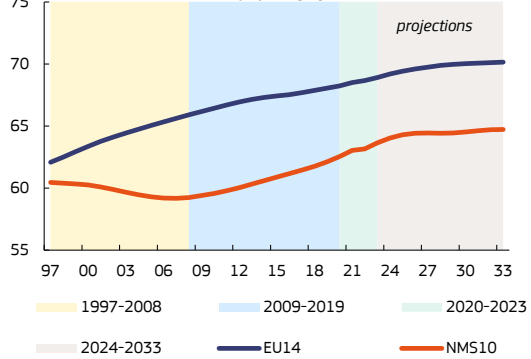


Note: Projections of convergence based on population-growth-adjusted real-potential-GDP growth differentials from EUCAM; 2015 references levels; \*PPS until 2025, exchange rates based on Spring Forecast assumptions thereafter. Pace of convergence defined as the change in the index of real GDP per capita in NMS10 (EU14=100).

**Convergence prospects are surrounded by risks largely related to the outlook for demographics and TFP growth.**

These benign prospects of a progressive narrowing and eventual closing of the income gap crucially depend on the rebound in the TFP growth and the containment of adverse labour supply trends. Needless to say, risks around these 10-year-ahead projections from both these factors are substantial. Moreover, they could reinforce one another if a shrinking and ageing population acts as a drag on TFP. Addressing these two challenges will require policies that foster investment, innovation and institutional capacity, as well as labour market policies aimed at closing the gap in the participation between NMS10 and EU14 (see Graph I.4.15). This can be done by addressing generally lower participation of women, promoting active ageing, or retaining and harnessing talents <sup>(88)</sup>.

Graph I.4.15: Developments in participation rate in EU14 and NMS10



Note: Participation rate is in % of 15-74 working age population.

<sup>(88)</sup> See European Commission's [new platform](#) and working groups to tackle demographic challenges across the Union.