National accounts coordinated 2024 benchmark revision - impact on annual main GDP and employment aggregates

Statistics Explained

Data extracted in October 2024

Highlights

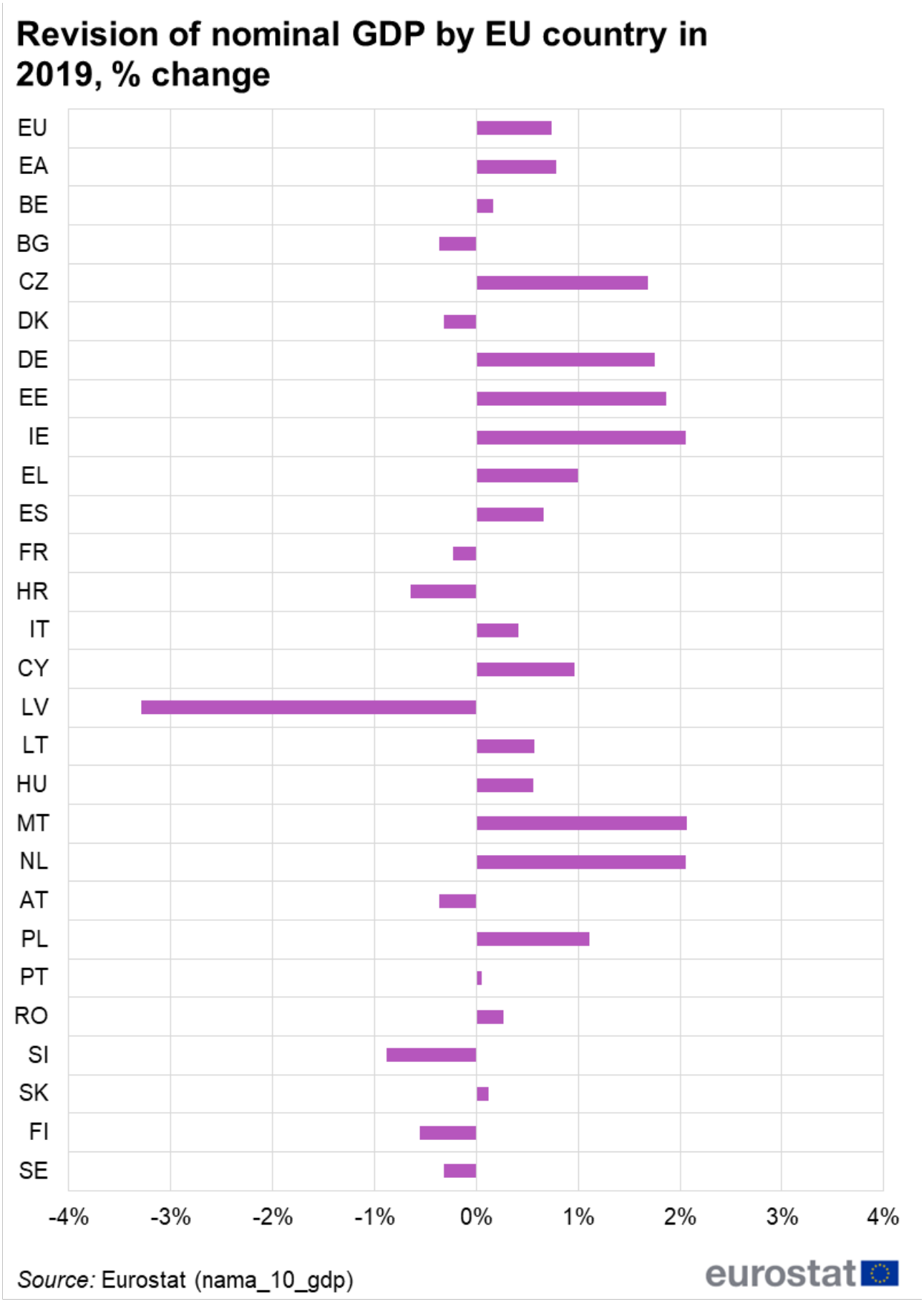

Figure 1: Impact of the benchmark revision on the level of GDP in 2019 (% change in current prices) Source: Eurostat (nama_10_gdp)

In 2024, 26 EU Member States participated in a coordinated benchmark revision of national accounts in line with recommendations of the harmonised European revision policy (HERP). National statistical institutes (NSIs) took the opportunity to improve the quality of their national accounts estimates further by introducing methodological or compilation changes as well as using new data sources. This had some effect on countries' estimates of gross domestic product (GDP) and its main aggregates, which are important macroeconomic indicators. This in turn affected European aggregates estimates. Luxembourg is the only EU country that delayed the benchmark revision to 2025.

This article analyses how the 2024 benchmark revision impacted the main annual GDP and employment aggregates. It focuses on the euro area and the European Union (EU) , while also highlighting the underlying revisions in country data. To compile the impact of the benchmark revisions on the euro area and the EU aggregates, we aggregate countries' data before and after their respective benchmark revisions.

As a result of the 2024 benchmark revision, GDP levels (in current prices) were revised upwards by 0.8% in the euro area and 0.7% in the EU for the year 2019. We focus on 2019 to assess the benchmark revision impact, allowing for a clearer evaluation, as more recent years are also influenced by routine updates.

The effects of the 2024 benchmark revision were more pronounced than those of the previous coordinated benchmark revision in 2019 but less significant than for the benchmark revision that introduced the European System of National and Regional Accounts (ESA 2010) in 2014. While national revisions of GDP levels in 2024 were mostly positive, this was not the case for all countries and all years. Also, revisions were generally lower for earlier years and higher for more recent years, due to a combination of routine revisions and benchmark revisions.

Background

Benchmark revisions are coordinated major revisions carried out at least once every five years to incorporate new data sources and major changes in international statistical methodology.

In line with the implementation of a harmonised European revision policy (HERP), 26 Member States carried out coordinated benchmark revisions of national accounts in 2024. Luxembourg is the only EU country that postponed the benchmark revision to 2025. This means that the 2024 benchmark revision covered countries that account for 99% of the euro area and 99% of the EU in terms of GDP. Similarly to Luxembourg, the EFTA countries Norway, Switzerland and Iceland are planning to carry out the benchmark revision in 2025.

Advanced estimates of the impact of the benchmark revision were difficult to provide for Member States. Based on a questionnaire circulated to national compilers in Spring 2024, it was expected that the impact of the 2024 benchmark revision on the European GDP levels would be about +1% for the EU and the euro area for the year 2019, reflecting effects of the benchmark revision but not regular revisions. While the questionnaires provided some advance information on expected changes, detailed information on countries improvements and their impacts was only published with national benchmark revisions. The information collected was also used to implement a coordinated communication strategy for the benchmark revision via the website Eurostat's dedicated section on benchmark revisions that was progressively updated and covered different aspects:

- Overview on requirements and main expected changes ;
- Overviews on national communication and data release dates ;
- Information on coordination and consistency of benchmark implementation ;
- Progress of benchmark data publication and associated metadata ;
- Information on GDP impacts and main changes .

Country specific metadata on data particularities were also published for a number of countries.

Impact on the level and growth rates of GDP in the euro area and EU

Since most countries implemented their 2024 benchmark revision between the end of May and the middle of October 2024, in line with the transmission deadlines for quarterly and annual main aggregates (i.e. 2 months after the end of the reference quarter and respectively 9 months after the end of the year), the incorporation of benchmark data into the European aggregates was progressive.

The European aggregates published on 6 September 2024 included benchmark revisions from 10 countries (Sweden, France, the Netherlands, Czechia, Denmark, Ireland, Estonia, Germany, Malta and Slovenia), while the subsequent estimates published on 21 October 2024 included the remaining publications of benchmark revisions.

The overall results of the 2024 benchmark revision implementation for the year 2019 can be summarised as follows:

- GDP at current prices for the euro area was revised upwards by 0.8%, while for the EU it was revised upwards by 0.7%.
- Over the entire time span from 1995 to 2023, the average revision for the euro area was +0.6%, while for the EU it was +0.5%.

Figure 1 shows revisions to the nominal GDP of the European aggregates as well as for all EU countries that performed a benchmark revision for the reference period 2019, while Figure 2 shows revisions for the period 1995 to 2023, split by different periods. Calculations of the revisions are based on the latest annual transmission before the announced benchmark revision date and the first annual transmission after the announced benchmark revision date. Data for the euro area and the EU are compiled by aggregating the values from each country.

On a country level, upwards revisions for 3 out of 4 of the largest economies of the EU can be seen: Germany, Italy, and Spain. For France, the revision of nominal GDP is mostly negative. Still, due to the size of the 3 respective economies, Germany, Italy, and Spain drive the revisions on the EU and the euro area aggregates upwards. In general, the impact of the revisions is mostly positive with exceptions for Greece, France, Latvia, Austria, Slovenia, Finland and Sweden. Malta observed the largest upward revision for the 2024 benchmark revision.

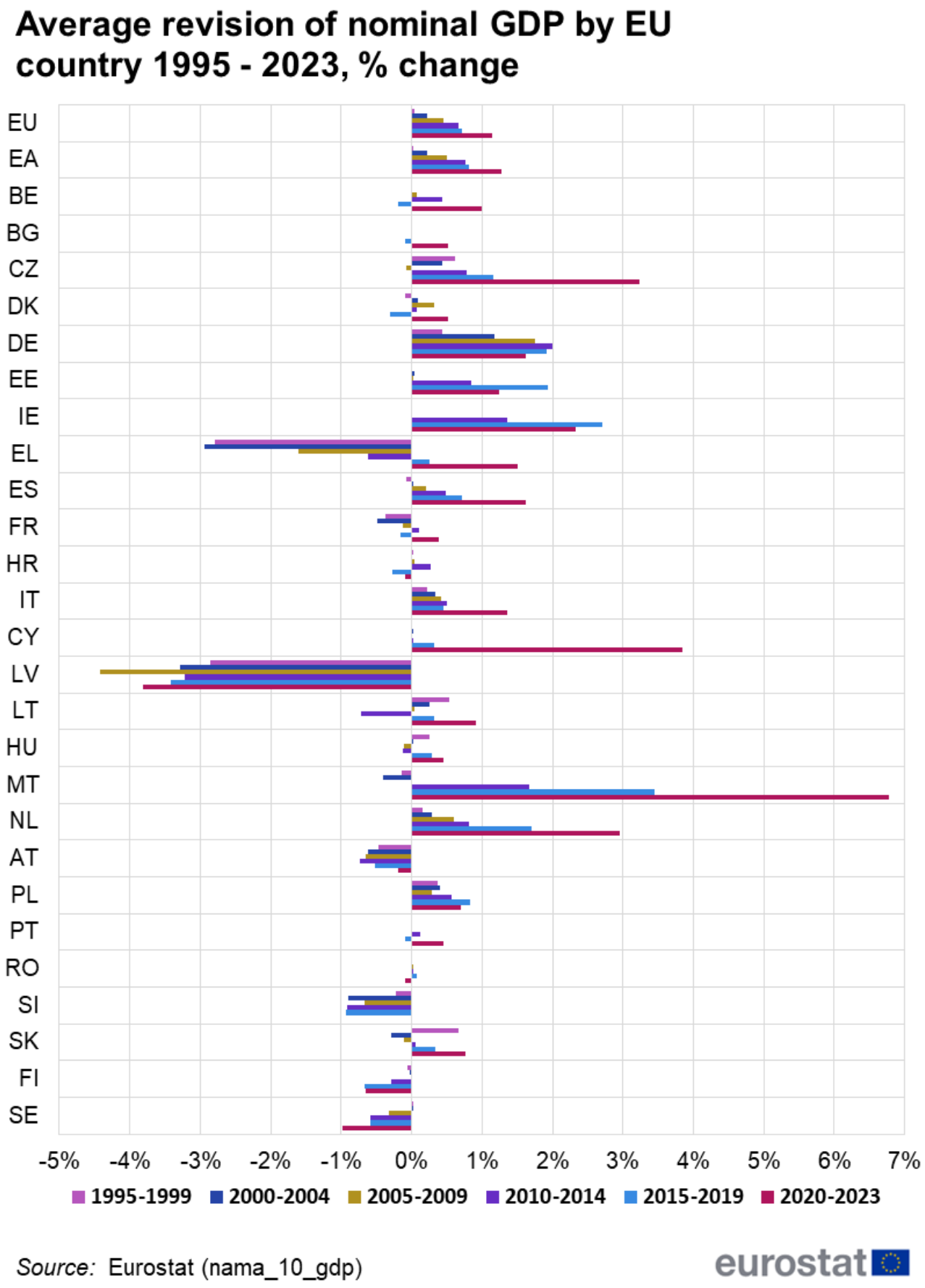

Figure 2: Impact of the benchmark revision on the level of GDP (average % change in current prices, 1995-2023) Source: Eurostat (nama_10_gdp)

Figure 3 shows revisions to growth rates of real GDP of the European aggregates as well as for all EU countries that performed a benchmark revision for the period 1995 to 2023. We can see that the growth rates are much less affected by the benchmark revision, and varied for different periods. Over the entire time span from 1995 to 2023, the average revision for the euro area and the EU was only +0.04 percentage points.

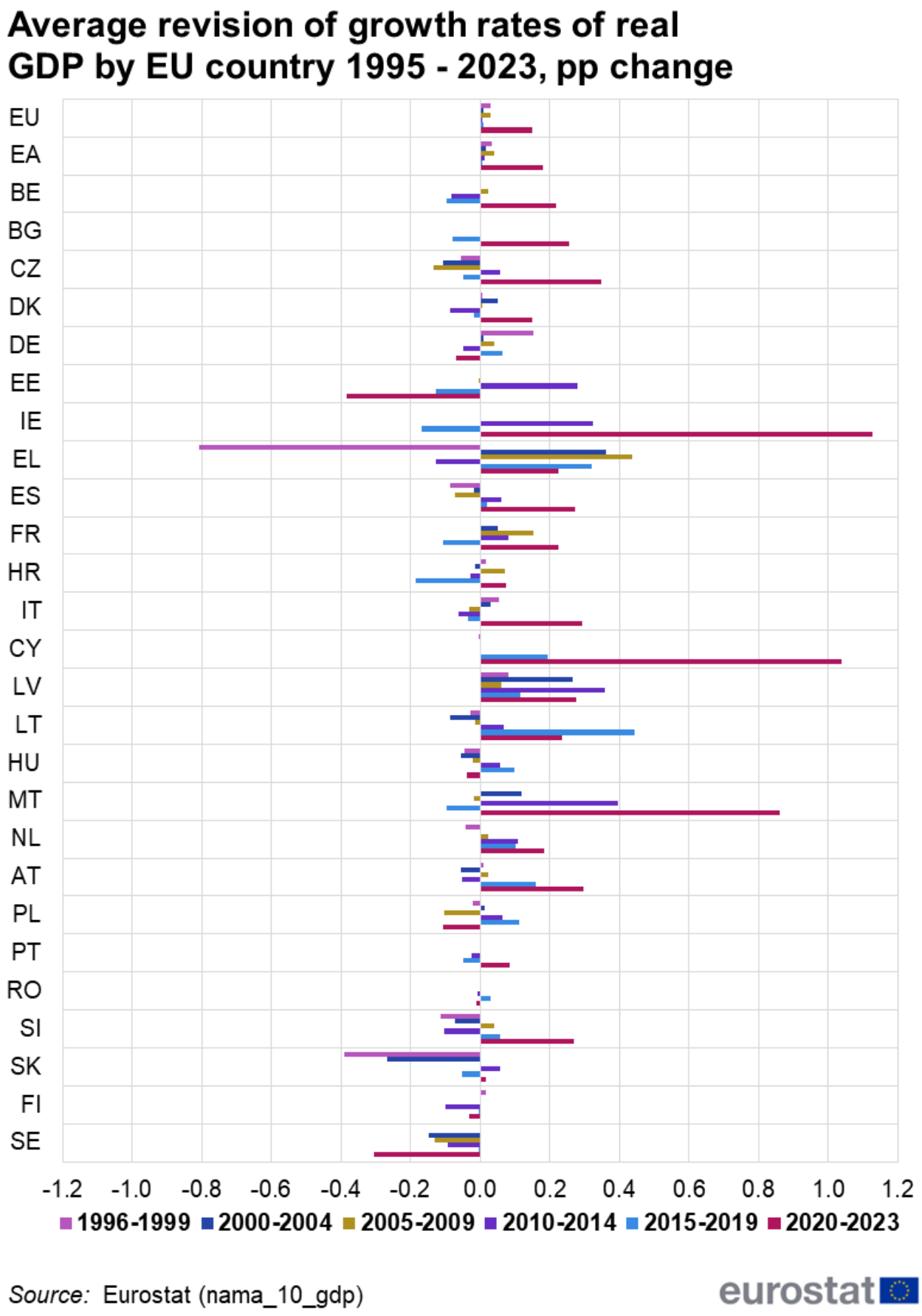

Figure 3: Impact of the benchmark revision on the growth rate of GDP (average pp change in chain-linked volumes, 1995-2023) Source: Eurostat (nama_10_gdp)

To better understand the source of revisions, the observed differences in the revision patterns across countries can be analysed together with provided methodological explanations to identify drivers for the revision of different GDP components.

Revision of GDP from the expenditure, production and income approach

Gross Domestic Product (GDP) can be calculated using 3 main approaches: the expenditure approach, the production approach, and the income approach. The expenditure approach sums total spending on final goods and services in the economy, including consumption, investment, government spending, and net exports. The production approach measures GDP by calculating the total value added at each stage of production, as well as taxes less subsidies on products, while the income approach totals all incomes earned by factors of production, including wages, profits, rents, and taxes, minus subsidies on production. Each approach provides a different perspective on economic activity, but should be reconciled to ultimately yield the same GDP figure.

Revision of main components from the expenditure approach

One of the 3 approaches of calculating GDP is the expenditure approach, where the sum of all final goods and services purchased is taken into account in an economy over a set period of time. This includes final consumption expenditure of households and non-profit institutions serving households (NPISH), general government final consumption expenditure, as well as gross fixed capital formation (GFCF), plus exports less imports as trade balance item.

Figure 4 shows the average revision of the EU (see the horizontal markers over each column) over the whole period (1995-2023) with the contributions to these revisions from different countries for specific aggregates. The largest positive revision from the expenditure approach in the benchmark revision was seen in the collective consumption expenditure of the general government at 2.1%, followed by individual consumption expenditure of households and NPISH with a 0.7% increase.

Significant downward revisions were noted for gross fixed capital formation, exports of goods and services, and imports of goods and services. The main driver for revisions is Germany, followed by France.

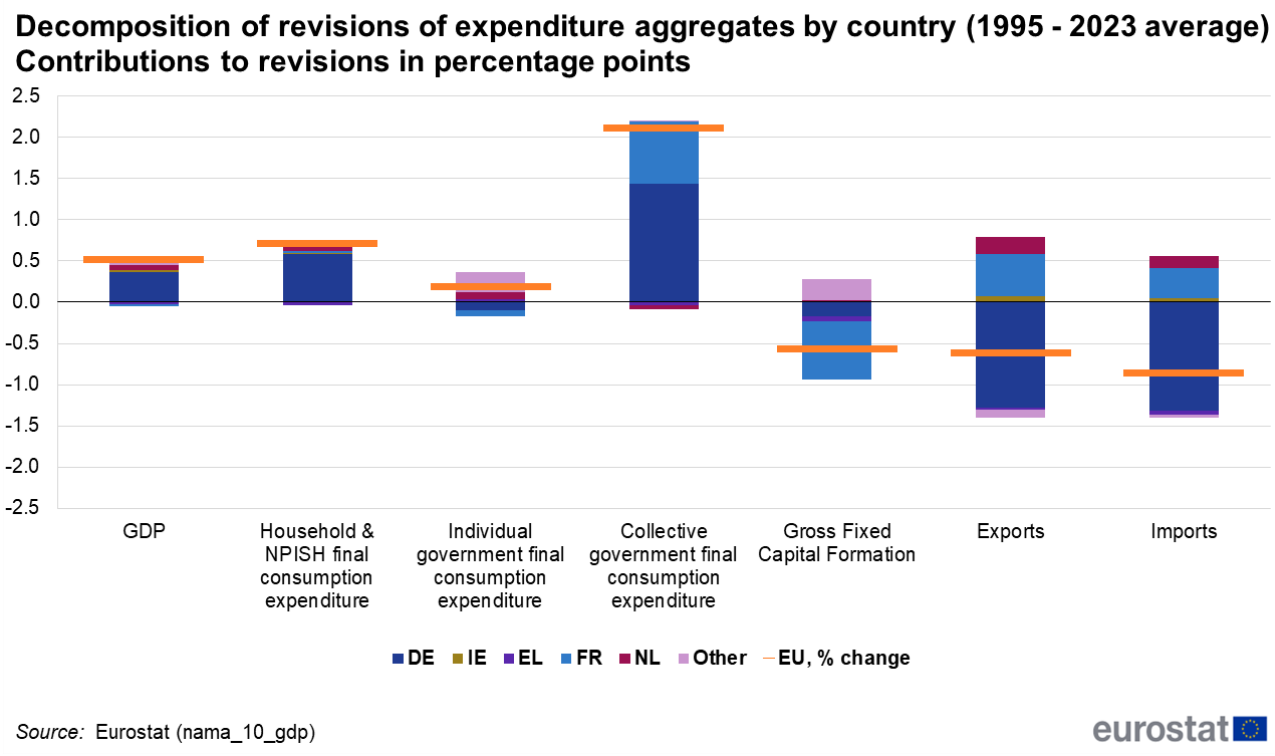

Figure 4: Average contribution to revision of expenditure components by EU country (% change in current prices, 1995-2023 average) Source: Eurostat (nama_10_gdp)

Revision of main components from the production approach

Another way of calculating and measuring GDP is the production approach, based on the value added by different production activities in the economic territory of a country during a given period, plus taxes less subsidies on products. Figure 5 shows the average revision of the EU (see the horizontal markers over each column) along with the contributions to revisions from different countries for different industries. We can see that the component with the largest upward revision is NACE activity L (real estate activities) and D21X32 (taxes less subsidies on products). Large downward revisions were observed for A (agriculture) and RTU (NACE sections R to U, covering arts, entertainment, and recreation). For most components from the production approach, the main driver for revisions are Germany and France.

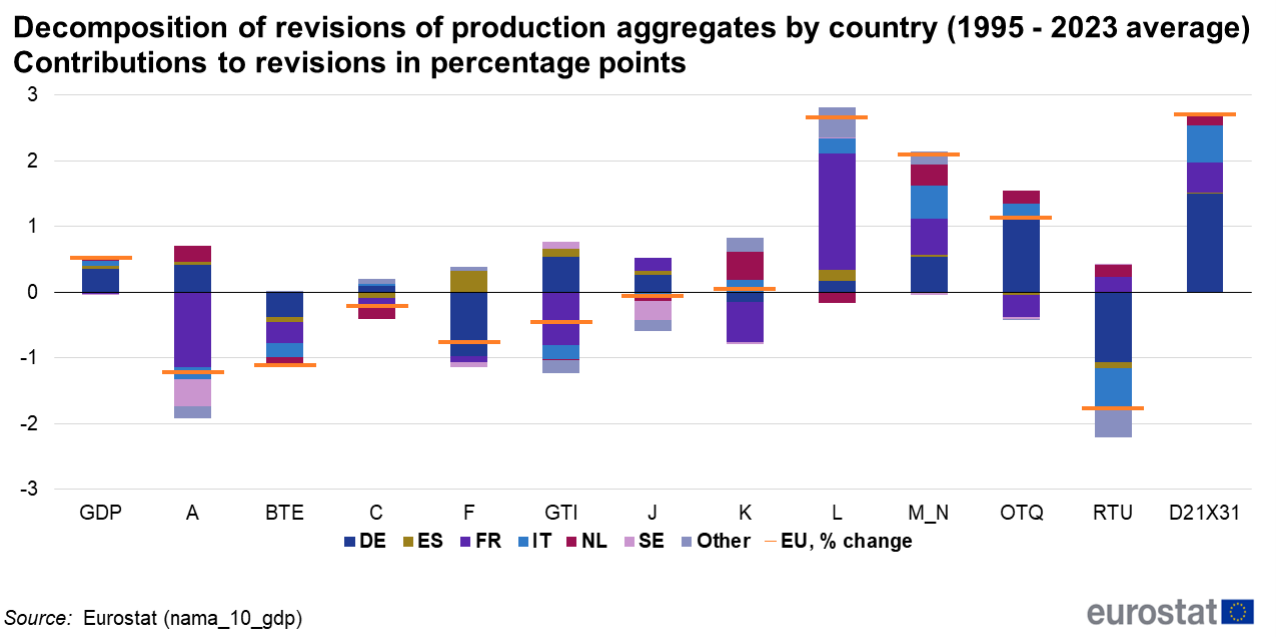

Figure 5: Average contribution to revision of production components by EU country (% change in current prices, 1995-2023 average) Source: Eurostat (nama_10_gdp)

Revision of main components from the income approach

Under the income approach, GDP is calculated by summing all sources of income earned during the production of goods and services, adding taxes on production and imports, and subtracting subsidies. Income is broken down by type: compensation of employees, gross operating surplus and gross mixed income.

Figure 6 shows the average revision of the EU (see horizontal markers across each column) along with the contributions to revisions from different countries for specific aggregates. We can see that all main income components contributed positively to GDP. Again, the biggest driver of the revision of the EU aggregate is Germany.

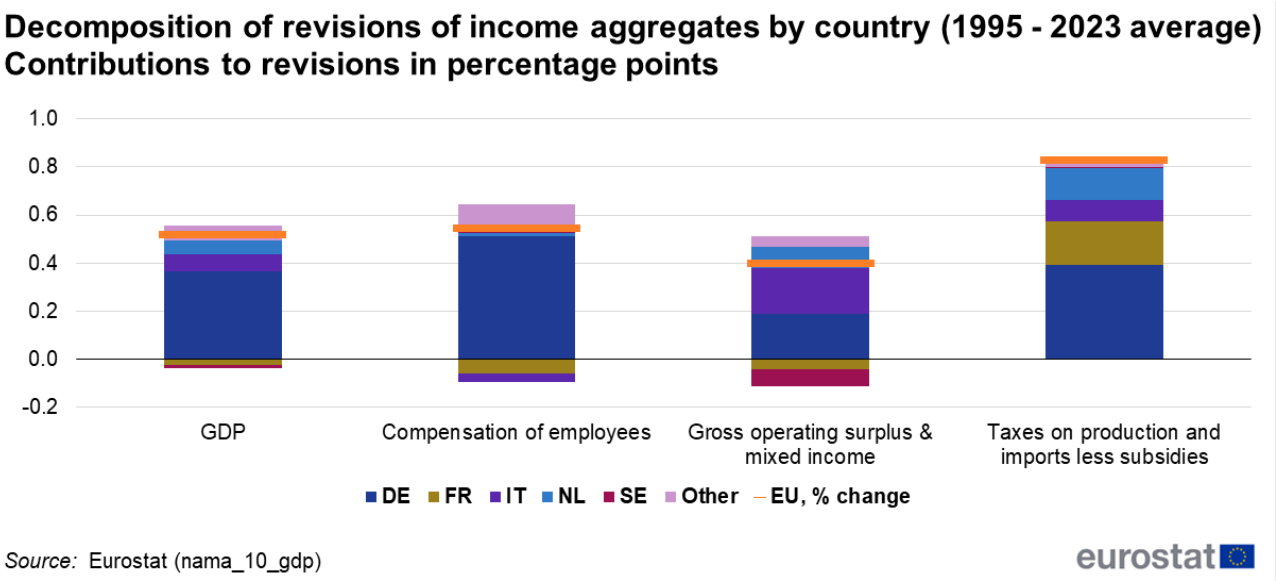

Figure 6: Average contribution to revision of income components by EU country (% change in current prices, 1995-2023 average) Source: Eurostat (nama_10_gdp)

Revisions to main employment aggregates

Figure 7 shows revisions to employment in persons of the European aggregates as well as for all EU countries that performed a benchmark revision for the period 1995 to 2023, split by different periods. While Malta and Sweden show notable upward revisions, Croatia and Italy revised their employment figures downwards. Overall, no clear upwards or downwards trend is visible, resulting in minimal overall revisions for the EU and euro area aggregates.

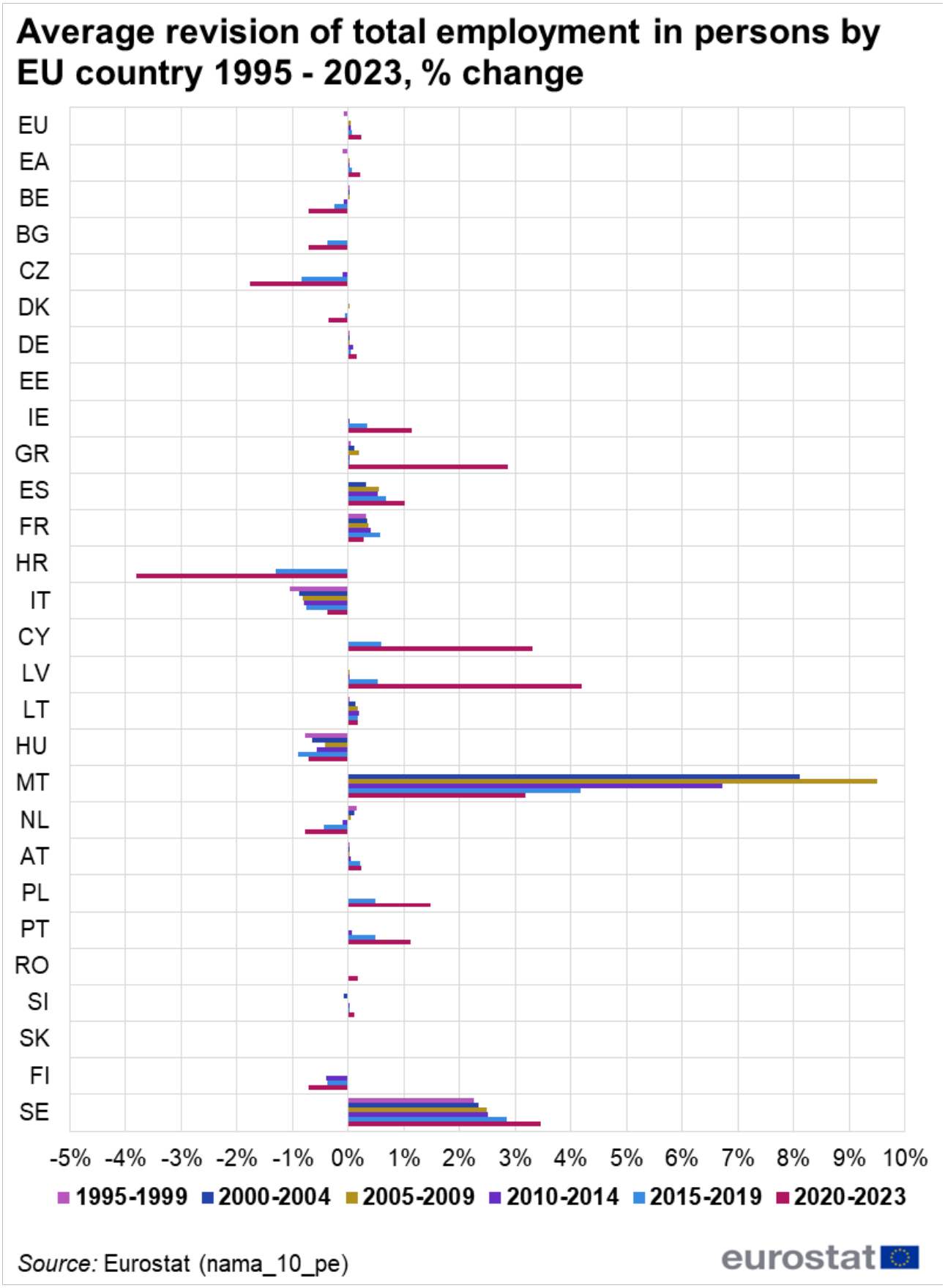

Figure 7: Impact of the benchmark revision on employment (average % change in persons, 1995-2023) Source: Eurostat (nama_10_pe)

Figure 8 shows the average revision of the EU employment (see horizontal markers across each column) along with

the contributions to revisions from different countries by NACE activity. We can see that the biggest positive revision was observed in NACE activities J (information and communication) followed by OTQ (NACE sections O to Q, covering public administration, education, health, and social work). Large downward revisions were observed for K (financial and insurance activities) and RTU (NACE sections R to U, covering art, entertainment and recreation). Overall, employment was revised upwards. However, the revision was smaller compared with GDP. The main drivers for revisions in employment are Spain, France, and Italy.

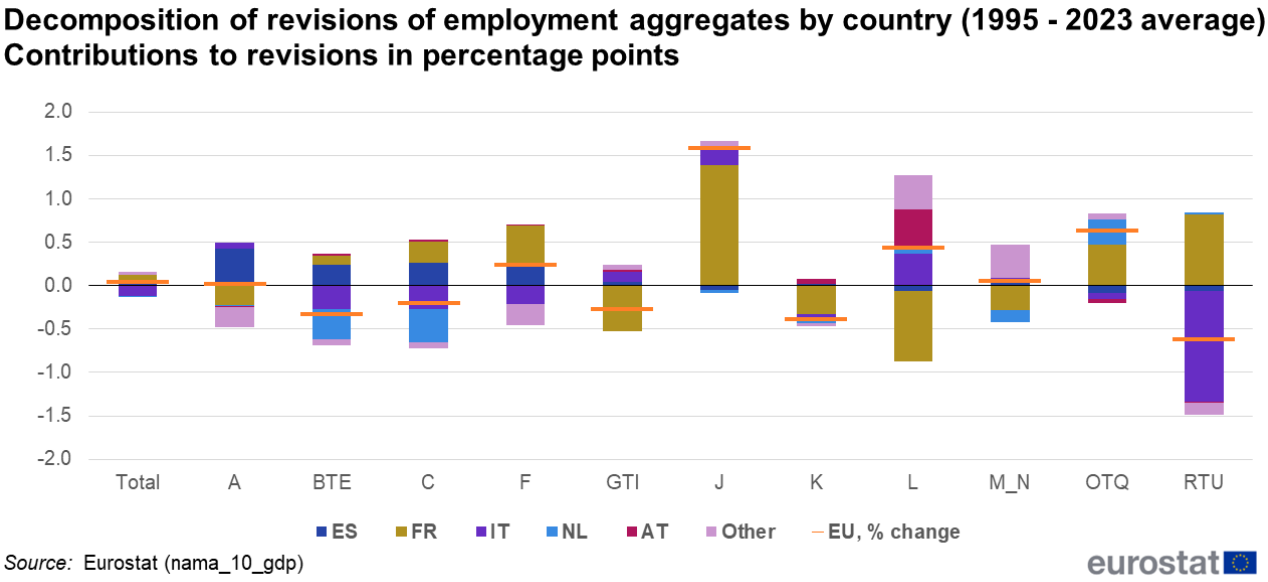

Figure 8: Average contribution to revision of employment by EU country (% change in persons, 1995-2023 average) Source: Eurostat (nama_10_pe)

Revisions to productivity

Labour productivity measures the efficiency of labour in producing goods and services, typically expressed as output per hour worked or output per person employed. It reflects how effectively labour resources are utilised in the economy and serves as a key indicator of economic performance and growth potential. In this context, we focus on measuring labour productivity in terms of hours worked, providing insights into the relationship between labour input and overall output.

Figure 9 shows revisions to growth rates of real GDP per hour worked of the European aggregates as well as for all EU countries that performed a benchmark revision for the period 1995 to 2023 in percentage points. Additionally, we display the revisions to growth rates per hour worked for agriculture, manufacturing, and construction (NACE activities A-F) and services (NACE activities G-U). We can see that the growth rates were revised upwards for GDP for both the euro area and the EU. Similarly, the growth rates were revised upwards in both zones for the service sector, suggesting increased productivity in the service sector. Contrarily, the growth rates were revised downwards for the agriculture, manufacturing, and construction sector, suggesting a decreased productivity.

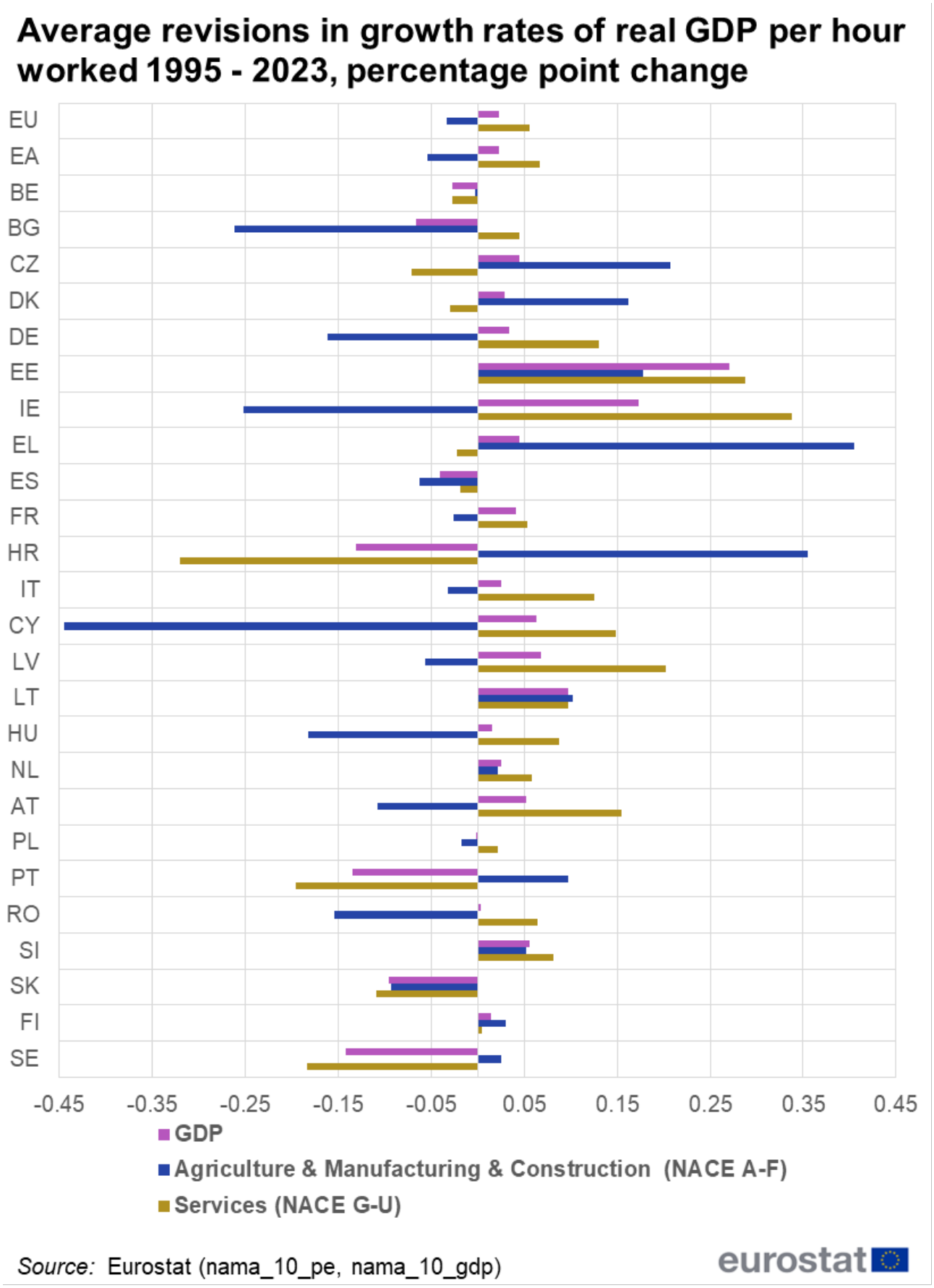

Figure 9: Average revisions of real growth rates per hour worked for GDP, production of goods (NACE A-F) and production of services (NACE R-U) by country (average pp change in chain-linked volumes per hour worked, 1995-2023) Source: Eurostat (nama_10_gdp)

Data sources

The analysis in this article is based on the annual national accounts data, including 2024 benchmark revisions transmitted in May-October of 2024. It compares the latest annual transmissions before the announced benchmark revision date and the first annual transmission after the announced benchmark revision date. Data for the euro area and the EU are compiled by aggregating the values from each country. Each country provided methodological explanations about benchmark revisions.

From September 2014, the data transmission in line with Regulation (EU) No 549/2013 of the European Parliament and of the Council on the European system of national and regional accounts in the European Union started to apply. This required Member States to transmit their main GDP aggregates based on the European system of national and regional accounts 2010 (ESA 2010) . In March 2023, Regulation (EU) No 734/2023 amended Regulation (EU) No 549/2013, introducing updates and repealing 11 legal acts in the field of national accounts to ensure the continued relevance and coherence of the national accounts framework. This became applicable for transmissions from 1 September 2024 onwards, unless temporary derogations were granted by Decision (EU) 1251/2024 .

Links to further relevant legislation can be found via the website: Legislation - Eurostat

Source data for tables and graphs

Download the MS Excel file containing the data for the Figures . This file also includes a detailed table of nominal GDP level revisions for each country and each year.

Context

National Accounts provide important macroeconomic indicators for national and EU decision making. It is, therefore, important that regular quality improvements are introduced in the data sources and methods. This is achieved through data revisions in line with the harmonised European revision policy . The most important changes are introduced with the benchmark revisions typically carried out every 5 years. In line with the European statistics code of practice this article communicates the main results of the 2024 coordinated benchmark revisions in a transparent way.

Explore further

Other articles

- European system of national and regional accounts - ESA 2010 - background article
- National accounts - an overview
- National accounts and GDP

Database

- National accounts (ESA 2010)(na10) , see:

Annual national accounts (nama_10)

Quarterly national accounts (namq_10)

Thematic section

- National accounts (including GDP)
- ESA 2010 dedicated section

Selected datasets

- National accounts (including GDP) (t_na) , see:

Annual national accounts (t_nama)

GDP and main components (t_nama_10_gdp)

Methodology

- Annual national accounts (ESMS metadata file — nama_10)
- European system of accounts - ESA 2010
- NACE Rev.2 publication
- Quarterly national accounts (ESMS metadata file — namq_10)
- ESA 2010 dedicated section
- Practical guidelines for revising ESA 2010 data

External links

- Harmonised European revision policy

Legislation

- Regulation (EU) No 549/2013 on the European system of regional and national accounts (ESA 2010)
- Regulation (EU) No 734/2023 amending the European system of regional and national accounts (ESA 2010)
- Decision (EU) 1251/2024 on granting derogations to Member States
- Links to further relevant legislation: Legislation - Eurostat