

# Impact of COVID-19 on main GDP aggregates including employment

Statistics Explained

Data extracted on 20 July 2020.

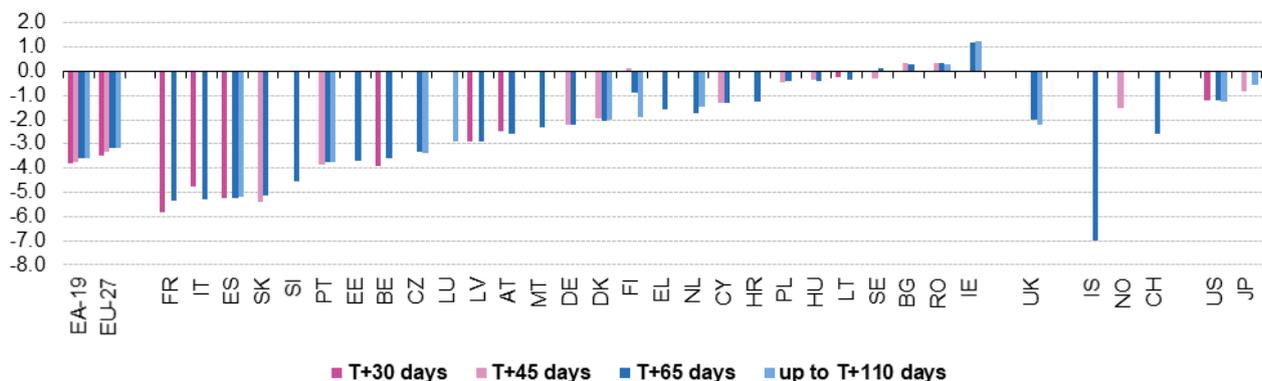
## Highlights

Impact of COVID-19 crisis on the quality of GDP estimates for 2020-Q1: limited revisions in most countries so far.

Analysis of main GDP aggregates for 2020-Q1: diverging impacts of COVID-19 observed across countries.

### GDP growth rates published for 2020Q1

% change to the previous quarter, based on seasonally adjusted data



Source: Eurostat (online data code: namq\_10\_gdp and (naidq\_10\_gdp) for US, JP data)

eurostat

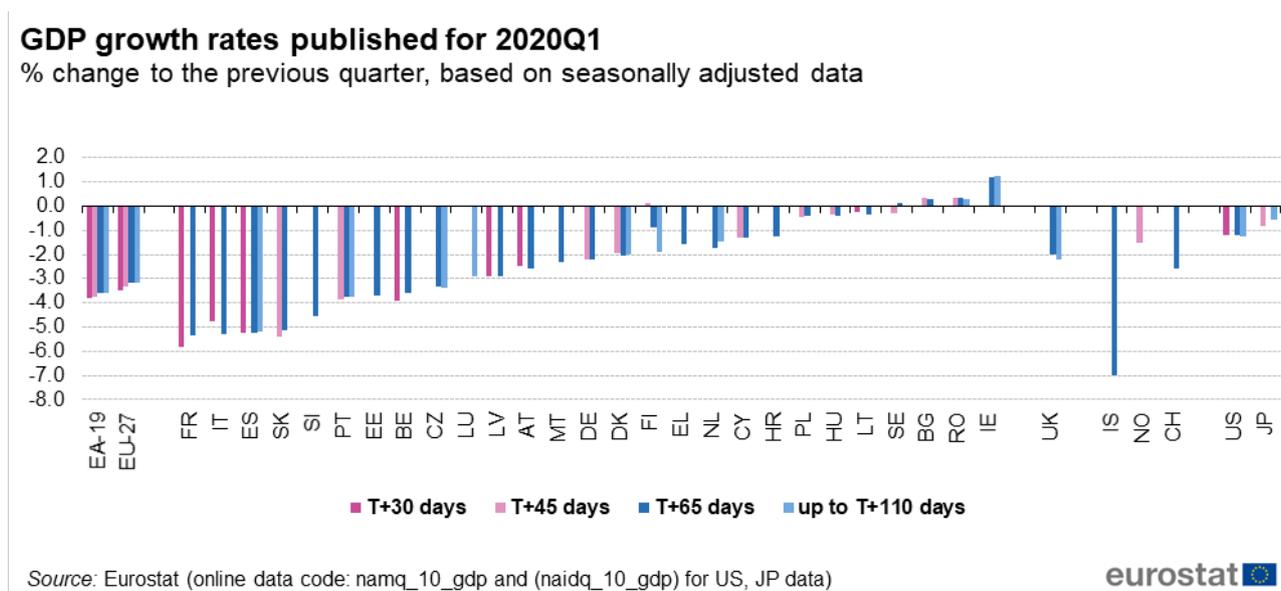
**GDP growth rates published for 2020Q1 % change to the previous quarter, based on seasonally adjusted data** Source: Eurostat (namq\_10\_gdp) and (naidq\_10\_gdp) for US, JP data

This article presents a short analysis of the main GDP aggregates including employment for 2020-Q1, which were affected by the COVID-19 pandemic for most countries. It starts with comparisons of GDP and employment estimates (including revisions), before deepening the analysis with a comparison of trends for selected main GDP and employment aggregates. Furthermore, a short summary of information from associated metadata is provided.

The analysis is based on data and metadata received in relation to the regular compilation and publication of European estimates. The current version reflects the data situation after the update of European aggregates published on 20 July 2020. The purpose of this article is to show not only the impact of the pandemic on main European GDP and employment aggregates, but also how estimates have evolved over time (so far). It also points out some divergence of trends across countries that may require further analysis to assess if they reflect genuine differences in economic trends, or methodological and practical compilation aspects that should be further harmonised.

## GDP estimates published for 2020-Q1

Since GDP is the most prominent indicator of economic activity, quarterly GDP growth estimates have received a lot of public attention to assess the severity of the economic impact of the COVID-19 pandemic. In accordance with the usual pre-agreed release schedules, Eurostat's estimates of GDP - as well as main aggregates including employment - were published on 30 April, 14 May, 8 June and 20 July in accordance with the pre-announced release schedule of quarterly estimates. These regular releases are also referred to as T+30, T+45, T+65 and T+110 releases, since they are published about 30, 45, 65 and 110 days after the end of each quarter.



**Figure 1: GDP growth rates published for 2020Q1 % change to the previous quarter, based on seasonally adjusted data Source: Eurostat (namq\_10\_gdp) and (naidq\_10\_gdp) for US, JP data**

Figure 1 presents published GDP quarter-on-quarter growth rates based on seasonally and calendar adjusted data for the [euro area \(EA-19\)](#), the [EU \(EU-27\)](#), EU Member States, EFTA countries as well as the United States and Japan. It reflects data published up to 20 July 2020. Data for EU Member States were sorted from lowest to highest growth rates for 2020-Q1. Reflecting the latest estimates published by this date, the impact of COVID-19 was largest in France and Italy (-5.3%), followed by Spain and Slovakia (-5.2%). Only Bulgaria, Romania and Ireland had positive growth rates (for Ireland related to activities of multinational enterprises). Figure 1 also shows how estimates were revised for some countries. For instance, France and Italy published substantially different initial estimates at the end of April (T+30 days), but showed similar declines at the end of May (T+65 days). Most other countries' estimates were less revised. However, Finland's and Sweden's estimates changed sign, while Finland's estimates were further revised down at the end of June (T+110 days). Luxembourg only sent one publishable estimate at the beginning of July (T+110 days).

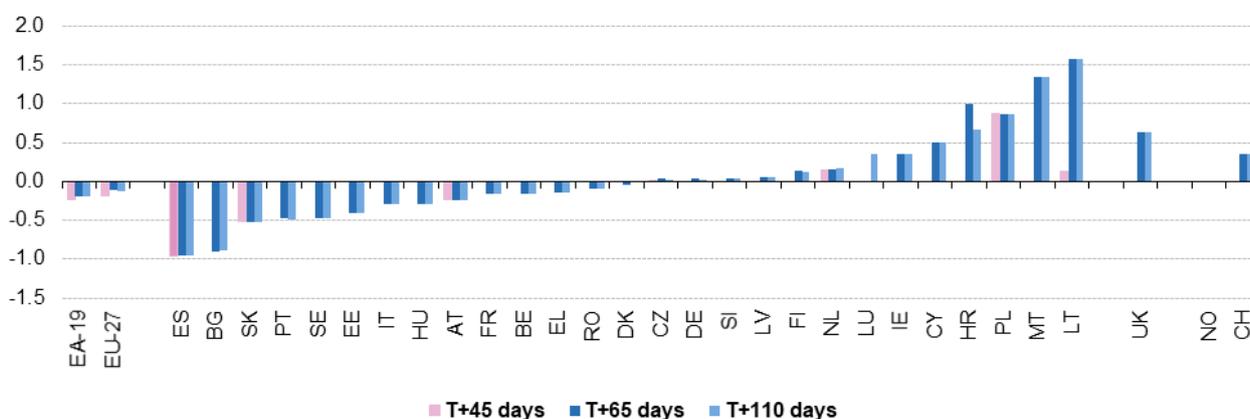
Reflecting underlying (published and unpublished) country data, revisions of the growth rates estimated for European GDP were relatively limited. The estimated quarter-on-quarter GDP growth rate for the euro area was -3.8% for the T+30 news release, confirmed at T+45 but revised up to -3.5% with the T+65 days and T+110 days releases; for the EU the estimates were -3.5% at T+30, revised up to -3.3% at T+45 and -3.2% at T+65 days and T+110 days. This means the estimates were revised up by 0.3 percentage points (pp) between the preliminary T+30 flash and first regular T+65 estimates. While this is somewhat higher than usual (normally +/- 0.1 pp in previous years), revisions remain quite limited in relative terms, i.e. taking into account that COVID-19 has led to high drops in GDP compared to a period of euro area and EU growth rates ranging between 0.1% to 0.8% for European aggregates in previous years (since 2013-Q2).

## Employment estimates published for 2020-Q1

With respect to the European estimates of employment growth in persons, Eurostat has so far released flash estimates after about 45 days, as well as regular estimates after about T+65 and T+110 days (see Figure 2). Revisions, but also the impact of COVID-19 on employment in persons were more limited than for GDP since only a few countries publish employment estimates before T+2 months (T+65 days) and update their estimates. For the euro area, a decline in the number of persons employed by 0.2% was confirmed by both regular estimates (T+65 and T+110 days), while the decline for the EU was reduced by 0.1 pp from -0.2 to -0.1% at T+65 days and confirmed with the T+110 days estimates. This is consistent with the fact that only Lithuania and Croatia have substantially revised their estimates so far. According to the latest status, Spain and Bulgaria show the largest declines in employed persons (-1.0% and -0.9%) followed by Slovakia, Portugal and Sweden (all -0.5%), while the highest increases were observed in Lithuania (+1.6%), and Malta (+1.6%) followed by Poland (+0.9%) and Croatia (+0.7%).

### Employment growth rates published for 2020Q1

persons employed, % change to the previous quarter, based on seasonally adjusted data



Source: Eurostat (online data code: namq\_10\_pe)

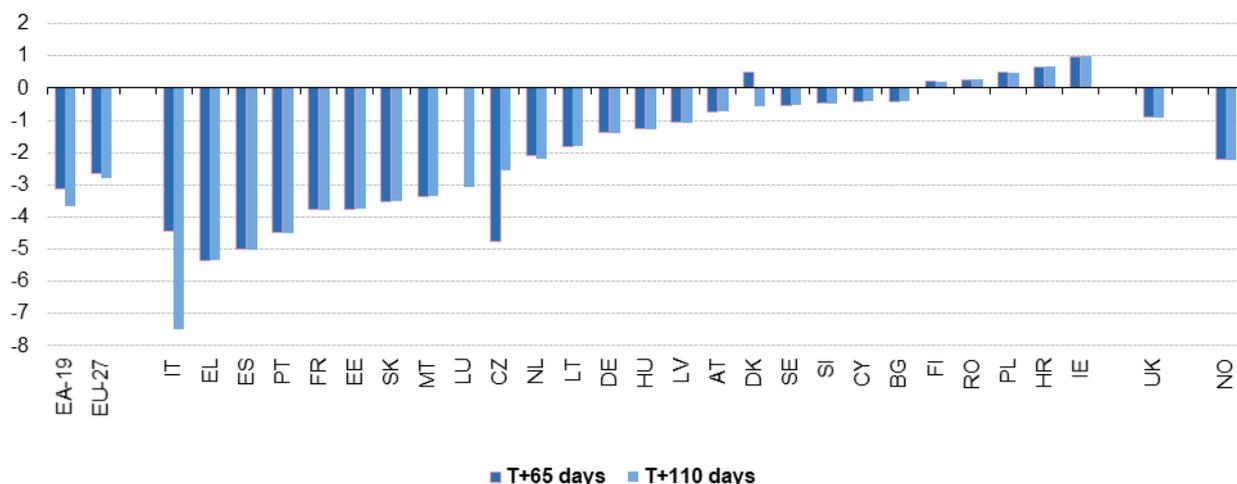
eurostat

**Figure 2: Employment growth rates published for 2020Q1 persons employed, % change to the previous quarter, based on seasonally adjusted data** Source: Eurostat (namq\_10\_pe)

While the impact of COVID-19 was still quite limited on employment in persons due to the mitigating effects of government support schemes (see metadata section), the impact on hours worked was much more pronounced (see Figure 3). First regular estimates of the quarter-on-quarter decline in hours worked published at T+65 days were -3.1% for the euro area and -2.6% for the EU, subsequently revised down to -3.6% for the euro area and -3.8% for the EU by the T+110 update. This mainly reflects revisions for Italy, which now shows the sharpest decline (-7.5%), followed by Greece (-5.4%) and by Spain (-5.0%). Positive growth rates for hours worked were observed for Ireland (+1.0%), Croatia (+0.7%) and Poland (+0.5%), as well as Romania (+0.3%) and Finland (+0.2%). Denmark and Czechia also revised their estimates down.

## Evolution of employment in 2020Q1

hours worked, % change to the previous quarter, based on seasonally adjusted data



Source: Eurostat (online data code: namq\_10\_pe)

eurostat

**Figure 3: Evolution of employment in hours worked (HW) in 2020Q1 % change to the previous quarter, based on seasonally adjusted series** Source: Eurostat (namq\_10\_pe)

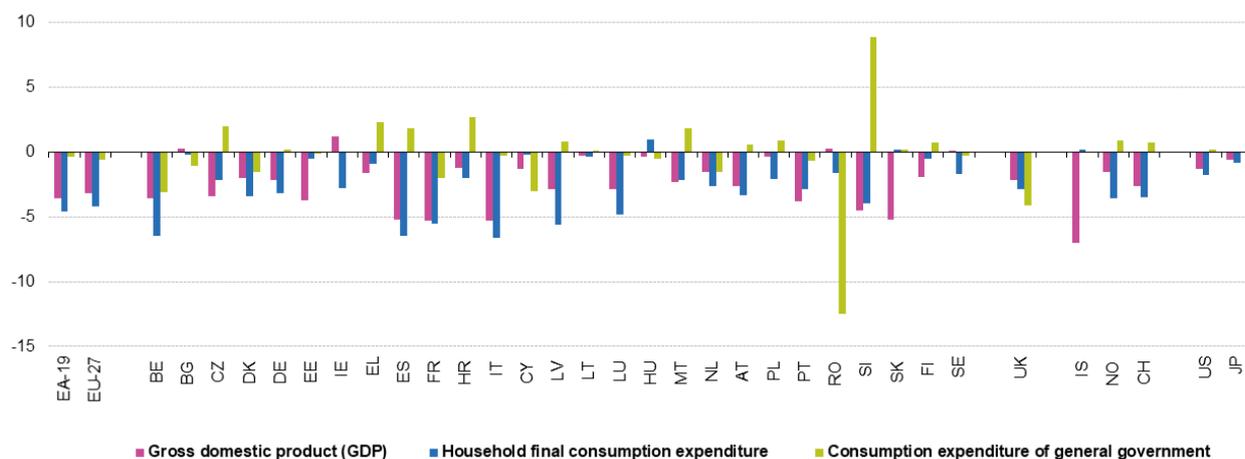
The following chapters deepen the analysis of COVID-19 on the economy by reviewing developments of main GDP aggregates from the expenditure, output and income approaches based on the data available on 20 July 2020.

## Main GDP expenditure aggregates

For the main GDP expenditure aggregates (see Figure 4), it can be noted that the drop in household final consumption expenditure was higher than for GDP in most countries. This reflects the restrictions on mobility and closure of shops introduced by many countries to contain the spread of COVID-19 in March 2020. Household consumption expenditure declined by 4.6% in the euro area and by 4.2% in the EU. The highest drops for EU countries were observed for Italy (-6.6%), Belgium and Spain (both -6.5%). The only positive growths rates were observed for Hungary (+1.0%) and Slovakia (+0.2%). On the other hand, consumption expenditure of general government showed a mixed picture, with significant differences across countries. For the euro area and the EU, general government consumption fell by 0.4% and 0.6% respectively. For EU Member States, by far the strongest decline and increase was recorded in Romania (-12.5%) and Slovenia (+8.9%) respectively. Besides genuine differences in the impact of COVID-19 on government activities across countries this could also partly reflect differences in the sources and methods to obtain volume estimates of specific non-market services, notably for health and education services, which could have some effect on the comparability of estimates.

### Evolution of GDP and main GDP expenditure aggregates in 2020Q1

% change over the previous quarter, based on seasonally adjusted data



Source: Eurostat (online data code: namq\_10\_gdp and naidq\_10\_gdp for US, JP data)

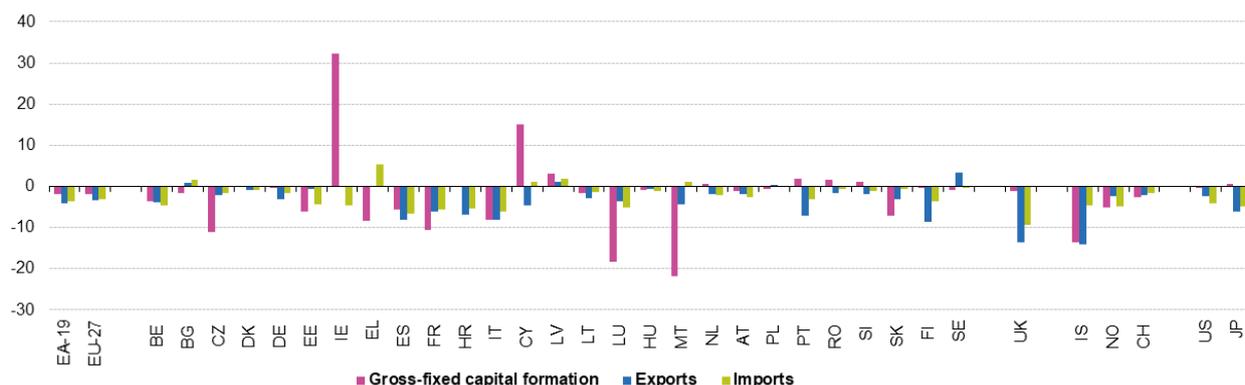
eurostat

**Figure 4: Evolution of GDP and main GDP expenditure aggregates in 2020Q1, % change over the previous quarter** Source: Eurostat (namq\_10\_gdp) and (naidq\_10\_gdp) for US, JP data

For the other main expenditure items, gross-fixed capital formation, exports and imports, significant decreases were observed in most countries (see Figure 5). While gross fixed capital formation dropped by 1.8% in both the euro area and the EU, sharp drops were observed in Malta (-21.9%) and Luxembourg (-18.4%), and sharp increases for Ireland (+32.2%) and Cyprus (+15.1%). Such developments are often explained by special factors, such as the activities of multinational enterprises (MNEs). Exports and imports were generally negatively impacted by the COVID-19 crisis. Exports fell by 4.1% for the euro area and by 3.4% in the EU, while imports fell by 3.6% and 3.1% respectively. For EU Member States, exports dropped the most sharply in Finland (-8.6%) and imports dropped the most sharply in Spain (-6.6%). Positive growth rates were only observed in a few countries, such as Sweden (+3.4% for exports) and Greece (+5.4% for imports).

### Evolution of main GDP expenditure aggregates in 2020Q1

% change over the previous quarter, based on seasonally adjusted data



Source: Eurostat (online data code: namq\_10\_gdp and naidq\_10\_gdp for US, JP data)

eurostat

**Figure 5: Evolution of main GDP expenditure aggregates in 2020Q1, % change over the previous quarter, based on seasonally adjusted data** Source: Eurostat (namq\_10\_gdp) and (naidq\_10\_gdp) for US, JP data

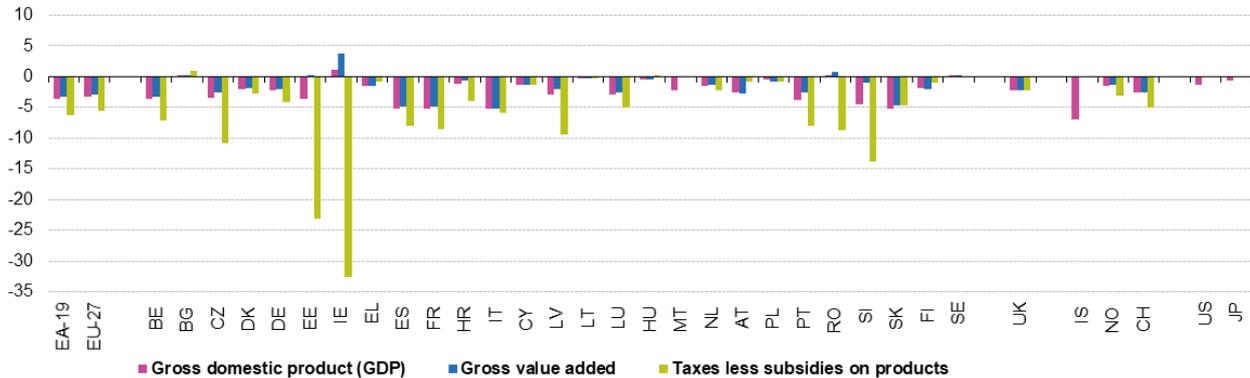
## Main GDP output aggregates

In terms of main output aggregates (see Figure 6), significant declines in gross value added were observed in the euro area and the EU (-3.6% and -3.2% respectively). Only Ireland (+3.7%) and Romania (+0.7%) recorded

increases. Moreover, restricted business activities in relation to COVID-19 also generally led to falls in taxes less subsidies on production, with declines of 6.3% for the euro area and 5.5% for the EU and most significant for Ireland (-32.7%) in relation to value added taxes (VAT).

### Evolution of main GDP output aggregates in 2020Q1

% change to the previous quarter, based on seasonally adjusted series



Source: Eurostat (online data code: namq\_10\_gdp and naidq\_10\_gdp for US, JP data)



**Figure 6: Evolution of main GDP output aggregates in 2020Q1, % change to the previous quarter, based on seasonally adjusted series Source: Eurostat (namq\_10\_gdp) and (naidq\_10\_gdp) for US, JP data**

## Main income aggregates

For the main income aggregates (see Figure 7), it can be noted that compensation of employees (D1) in current prices decreased slightly for the European aggregates but remained stable or even increased in most EU Member States, with the highest increases recorded in Romania (+2.1%), Bulgaria (+1.9%), Estonia and Latvia (both +1.6%). Nevertheless, major declines were observed for Italy (-6.0%), Slovenia (-3.8%) and Belgium (-2.5%). While the resilience of D1 can be related to government support schemes for employees, taxes less subsidies on products (in current prices) dropped in almost all countries, especially in Ireland (-32%), Romania (-27.6%), Slovakia (-23.7%) and in Estonia (-23.6%). Gross operating surplus and mixed income (in current prices), which is generally compiled as a residual in relation to other GDP estimates, also decreased in almost all countries, with most pronounced drops in Spain (-10.5%) and France (-8.6%).

## Evolution of main GDP income aggregates in 2020Q1

% change over the previous quarter, based on seasonally adjusted data



Source: Eurostat (online data code: namq\_10\_gdp)

eurostat

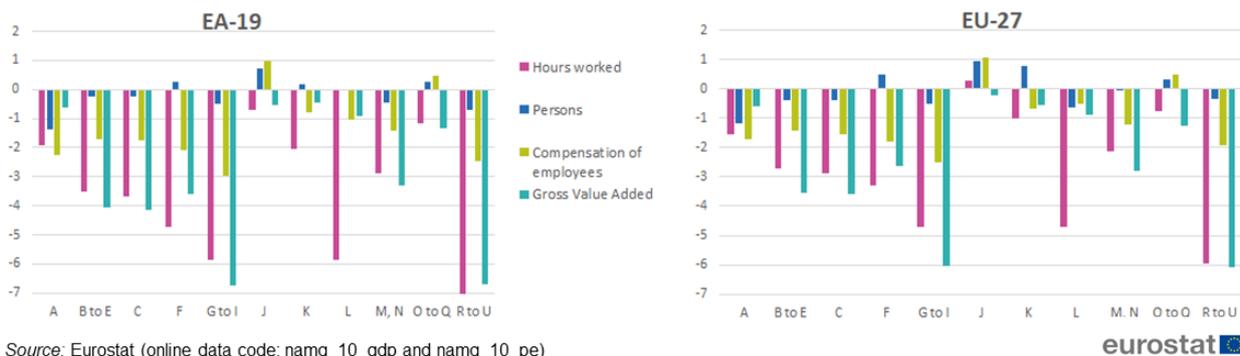
**Figure 7: Evolution of main GDP income aggregates in 2020Q1, % change over the previous quarter, based on seasonally adjusted Source: Eurostat (namq\_10\_gdp)**

## Trends by NACE industries

With respect to specific industries, it can be noted that gross value added and hours worked decreased in all industries in 2020-Q1 with rather similar trends in the euro area and the EU. For both zones, the largest fall was observed for industries G to I (which includes transport, accommodation and food services activities) and R to U (which includes arts, entertainment and recreations activities), which were the industries most affected by government shutdowns to contain the spread of COVID-19.

Declines in compensation of employees and employment in persons were also observed in most industries, but to a lesser extent, reflecting government support schemes. Industry J (information and communication) showed a different trend for number of persons and compensation of employees as both of them recorded an increase (+0.7% for number of persons and +1.0% for compensation of employees in EA). To a lesser extent, the same trend is observed in industry O to Q (which includes health activities) (+0.3% for number of persons and +0.5% for compensation of employees in euro area). Nevertheless, gross value added also decreased for both these industries.

**Growth rate trends by industry in 2020Q1,**  
 % change over the previous quarter, based on seasonally adjusted data



Source: Eurostat (online data code: namq\_10\_gdp and namq\_10\_pe)

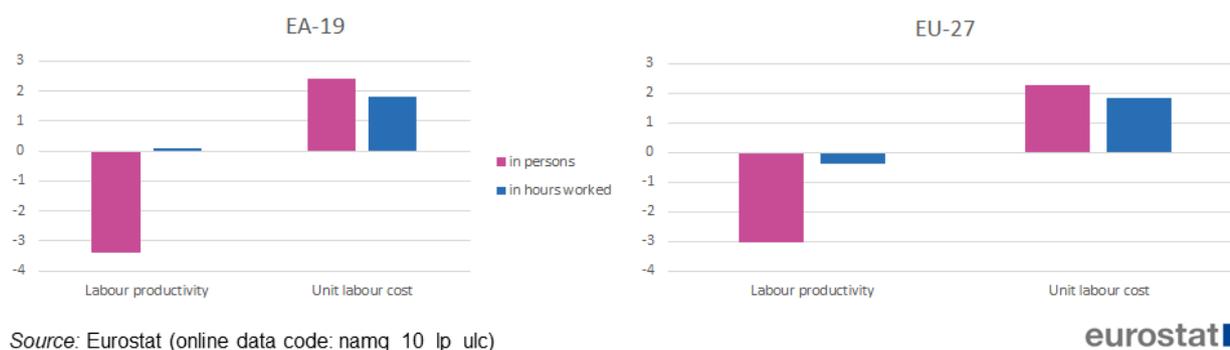
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**Figure 8: Growth rate trends by industry in 2020Q1, % change over the previous quarter, based on seasonally adjusted data** Source: Eurostat (namq\_10\_gdp) and (namq\_10\_pe)

**Impact on productivity and unit labour costs**

The combination of changes in gross value added and employment as well as the average compensation of employees can be used to analyse changes in derived productivity and unit labour cost indicators. Since employment in hours worked fell much more sharply than for persons employed, the fall in labour productivity was much more pronounced for persons than for hours worked. The increase in unit labour cost was higher for employment in persons but still quite strong for employment in hours worked, as shown in Figure 9 below.

**Labour productivity and unit labour costs in 2020Q1,**  
 % change over the previous quarter, based on seasonally adjusted data



Source: Eurostat (online data code: namq\_10\_lp\_ulc)

eurostat

**Figure 9: Labour productivity and unit labour costs in 2020Q1, % change over the previous quarter, based on seasonally adjusted data** Source: Eurostat (namq\_10\_lp\_ulc)

**Importance of guidance and metadata**

The main GDP and employment aggregates for 2020-Q1 were the first national accounts estimates affected by the COVID-19 pandemic, even if the effect was strong only in the last month of the quarter. Subsequent additional national accounts estimates, for example focussing on specific sectors, will allow countries to incorporate additional sources and refinements to their methods and thus to improve the quality of estimates. While this may lead to revisions of initial estimates, this is a usual and appreciated process to obtain a more accurate picture of economic developments over time.

In order to improve the understanding of estimates in relation to the particular circumstances created by the COVID-19 pandemic, Eurostat stepped up its efforts to improve the availability of guidance and metadata. Since it became clear that the 2020-Q1 estimates would already be impacted by the COVID-19 pandemic in most countries, Eurostat and NSIs started preparations to ensure the timeliness and quality of estimates. Based on the discussions of possible issues and solutions with NSIs, Eurostat released first guidance notes on COVID-19 related compilation processes, which were published on a dedicated guidance webpage. This included two notes on [QNA compilation](#) and [transmission aspects](#). National compilers were also asked to respond to short questionnaires associated with their data transmissions. A [summary](#) is published on the Eurostat website for all nationally published country estimates.

While it is clear that first GDP estimates should be considered as more uncertain under the dramatic conditions of the COVID-19 pandemic, apparent differences in specific aggregates shown in this article have also raised some discussion on the plausibility of cross-country differences and the comparability of estimates, notably with respect to volume estimates for non-market activities such as health and education that were significantly impacted by the COVID-19 pandemic. Specific guidance regarding the recording of [government support schemes for employment](#) and [estimates for non-market services](#) were published. In practice, the overall impact of COVID-19 on non-market estimates is difficult to estimate, as work continued remotely and an increase of COVID-19 related health services was counterbalanced by postponed other treatments. Obviously, there are however genuine differences in the impact of COVID-19 on the economies, reflecting differences in the spreading of the virus, government measures and economic structures, so that no uniform impact should be expected.

While compilers have already gained important experience in dealing with the impact of COVID-19 on national accounts estimates, the compilation of estimates for 2020-Q2 may be even more difficult since the entire period was, to different extents, affected by COVID-19 effects. Eurostat is ready to continue to support national compilers with the exchange of information and targeted guidance notes to ensure that national accounts estimates published in the form of main aggregates remain as accurate and reliable as possible under these difficult circumstances.

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## Data sources

Eurostat collects GDP and employment data in the framework of ESA 2010. See [here](#) for more details. Additional information on the dissemination of ESA 2010 data is available under latest news on the dedicated website and in the database [section National accounts \(ESA 2010\) \(na10\)](#) European aggregates are revised at specific release dates. The [preliminary flash estimate](#) of GDP growth of the second quarter of 2020 will be released on 31 July 2020 and updated on 14 August 2020. The next regular estimates of European aggregates will be published on 8 June 2020 (for both GDP and employment estimates) and then updated on 19 October 2020. Please note that most EU countries carried out benchmark revisions in 2019. Other countries are planning to conduct their benchmark revisions in September-October of 2020. For further details see the [Eurostat website](#). Analysis explaining how coordinated benchmark revisions have changed the annual main GDP aggregates was provided in an article at the end of October 2019.

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## Context

Quarterly figures on the evolution of gross domestic product (GDP) and its main aggregates are among the most significant indicators of the state of any economy, be it at a national or European level, and are of key interest to users. Typical users of quarterly national accounts (QNA) figures are market analysts, forecasters or economic and monetary policy advisors interested in assessing the state of the current [business cycle](#). The ESA 2010 distinguishes between two employment concepts depending on geographical coverage: resident persons in employment (i.e. the national scope of employment) and employment in resident production units irrespective of the place of residence of the employed person (i.e. domestic scope). The ESA 2010 recognises several employment measures: persons, hours worked and jobs. Eurostat publishes mainly employment data measured in persons and

in hours worked.

</context>

## Explore further

### Other articles

- [Quarterly national accounts - GDP and employment](#)
- [National accounts - an overview](#)
- [National accounts and GDP](#)
- [Employment - annual statistics](#)
- [Employment statistics within national accounts](#)

### Database

- [Quarterly national accounts \(namq\\_10\)](#)
- [National accounts - international data cooperation \(naidq\\_10\)](#)

### Thematic section

- [National accounts \(including GDP\)](#)
- [ESA 2010 — Overview](#)

### Publications

- [NACE Rev. 2 — Statistical classification of economic activities in the European Community](#)

### Selected datasets

- [National accounts \(including GDP\) \(t\\_na\)](#) , see:

[Annual national accounts \(t\\_nama\\_10\)](#)

[Quarterly national accounts \(t\\_namq\\_10\)](#)

[National accounts - international data cooperation\] \(t\\_naidq\\_10\)](#)

### Methodology

- [Quarterly national accounts](#) (ESMS metadata file — namq\_esms)
- [Annual national accounts](#) (ESMS metadata file — nama10\_esms)
- [European system of accounts — ESA 2010](#)
- [NACE Rev.2 publication](#)
- [European system of accounts — ESA 2010 — Transmission programme of data \(multilingual\)](#)
- [Eurostat-OECD Methodological Manual on Purchasing Power Parities](#)
- [Handbook on prices and volume measures in national accounts](#)

- [Handbook on the compilation of statistics on illegal economic activities in national accounts and balance of payments](#)
- [Manual on the changes between ESA 95 and ESA 2010 — 2014 edition](#)
- [Practical guidelines for revising ESA 2010 data — 2019 edition](#)

#### **Other methodological information**

- [National accounts — Methodology](#) , see:
  - [Main aggregates](#)
  - [Employment](#)

#### **External links**

- [United Nations Statistics Division 2008 SNA](#)

#### **Legislation**

- [Regulation \(EC\) No 1392/2007](#) of 13 November 2007 amending Regulation (EC) No 2223/96 with respect to the transmission of national accounts data
- [ESA 2010 Introduction](#)