

The European Statistical Recovery Dashboard

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The coronavirus disease (COVID-19) turned into a global pandemic by March 2020, striking Europe suddenly and with great force. It came with restrictions on mobility and public health measures, implemented to flatten the curve of infections and prevent healthcare systems from being overloaded, and these restrictions disrupted business activity across the European Union (EU). In this context, new data demands quickly emerged: there was an urgent need to track at high frequency what was happening from economic, social and environmental perspectives, in an uncertain situation. Official statistics were highly relevant for timely decision-making, with particular attention to monthly and quarterly data.

The answer of the European Statistical System

The European Statistical System demonstrated its *capacity to adapt quickly, prioritise work and respond to new demands during difficult times*, as required by Commissioner Gentiloni.

The answer of the European Statistical System has covered different developments: on top of ensuring continued production and dissemination of statistics even in the pandemic challenging conditions, Eurostat published a number of guidelines and methodological notes on statistical production and communication in the context of the COVID-19 crisis, and dedicated a section of its website to support statisticians. Moreover, Eurostat coordinated the development of the European Statistical Recovery Dashboard¹,

or recovery dashboard in short. The recovery dashboard put together a set of indicators that allows for tracking the recovery from the COVID-19 crisis, presenting them in an attractive and user-friendly way, together with a Eurostat commentary giving a multi-indicators view on the most recent developments.

The work started in July 2020, triggered by a request by the German presidency of the Council of the European Union, and the first issue of the dashboard was released in December 2020, with the support of Commissioner Gentiloni:

“Our priority in 2021 will be to successfully steer the European economy out of the unprecedented crisis caused by the COVID-19 pandemic. To take the right decisions, we need to have objective and timely data at our disposal.

That’s why today’s initiative from Eurostat and the other members of the European Statistical System is so important. The Recovery Dashboard will inform our actions as we work to recover and to shape a better life for tomorrow through NextGenerationEU”.

The main characteristics of the recovery dashboard were defined early on: it covers the EU member states and EFTA countries (when data are available); it is updated monthly; it consists of monthly and quarterly indicators, and it is improved over time.

Which indicators for measuring the recovery?

The design of the recovery dashboard started with the selection of indicators. Eurostat is committed to publish statistics of high quality, so quality aspects are important for an indicator to be selected. In some cases it was necessary to include ‘experimental statistics’.

Moreover, it was clear from the beginning that the dashboard should not be limited to economic indicators, but also cover social, environmental and health aspects.

When designing dashboards, the first challenge is the trade-off related to the number of indicators

¹ <https://ec.europa.eu/eurostat/cache/recovery-dashboard/>

selected: adding too many indicators creates the risk of overwhelming the user with too much information, whereas excessively restricting the choice could exclude relevant information.

On top of well-known macroeconomic indicators, such as *Gross domestic product and Inflation*, there was high interest in measuring the social impact of the pandemic, particularly the labour market, to the environmental dimension of the recovery, and to morbidity indicators.

With respect to mortality indicators, Eurostat decided not to concentrate on daily/weekly deaths to monitor the spread of the pandemic, but to offer a harmonised indicator to measure what was the “unusual” percentage of additional deaths. The Excess mortality indicator presented in the recovery dashboard does so by comparing the average mortality in a given month with the average of the same months in the pre-pandemic period 2016-2019.

The recovery dashboard also includes indicators concerning the most impacted sectors of the economy, such as the *number of flights* (commercial flights by reporting country, based on Eurocontrol data), and the *nights spent in tourist accommodation establishments*. Two indicators cover the environmental dimension: the monthly average concentration of Nitrogen dioxide (NO₂) in European capital cities, *Air quality*, and the quarterly *Greenhouse gas emissions by the economy*, covering emissions of carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O) and fluorinated gases. They were introduced into the dashboard after its launch, as part of its continuous improvement.

Focusing on the social dimension, there was a lot of attention on the status of employed and unemployed persons, in view of the relevance of the pandemic shock on the labour market. The statistical definition of being unemployed requires to be actively looking for a job. However, a significant proportion of those who had registered in unemployment agencies were no longer actively looking for a job due to the pandemic, as a consequence of, for example, being under confinement measures or no longer available for work if they had to take care of their children during a lockdown. Employed people were also impacted: they could work less hours due to restriction imposed by the enterprises,

often benefiting from short-time work schemes or other support policies put in place by governments. Moreover, the number of hours worked could have decreased without a direct impact on the unemployment rate. These issues generated interest in new indicators, such as the *labour market slack*, which measures unmet needs for employment by considering the sum of unemployed persons, underemployed part-time workers (those part-time workers who wish to work more), and persons either seeking work but not immediately available, or available to work but not seeking it. This indicator is therefore part of the recovery dashboard, together with three indicators on *labour market flows* showing the movements of individuals between employment, unemployment and economic inactivity.

Another interesting indicator is the economic sentiment indicator (ESI), a composite indicator known for its ability to track GDP growth. The ESI is a weighted average of the balances of replies to selected questions addressed to firms in five sectors (industry, services, consumers, retail and construction) in the context of the Business and Consumer Surveys managed by the Directorate-General for Economic and Financial Affairs of the European Commission. The ESI is of particular interest due to its timeliness: it is a monthly indicator available at the end of the reference month.

Looking at indicators for business, two more indicators are worth mentioning in relation to the impact of COVID-19: the first is the quarterly index of bankruptcy declarations, which measures the evolution of businesses that have started the procedure of being declared bankrupt.

The second interesting indicator is the quarterly index of registrations of new businesses, which measures the evolution of entered legal units in the business register at any time during the reference quarter. Those two indicators improved the monitoring of business demography; they are of high relevance not only for the monitoring of the business sector, but also for their potential impact on the labour market and the social consequences of the pandemic.

An analysis of all indicators is out of the scope of this article, and we invite the reader to have a look at the recovery dashboard for a complete list.

The Eurostat commentary

A monthly Eurostat commentary on the current situation is integrated into the recovery dashboard. The commentary describes the recent evolution of dashboard indicators, and it has been enriched by charts and graphics to highlight the main messages. Particular attention is given to comparing the current situation with the pre-pandemic one, and to show variability across countries. This is implemented by displaying in the graphs the highest and lowest values across member states, together with the linear evolution of the European Union indicators, and references to countries in the text.

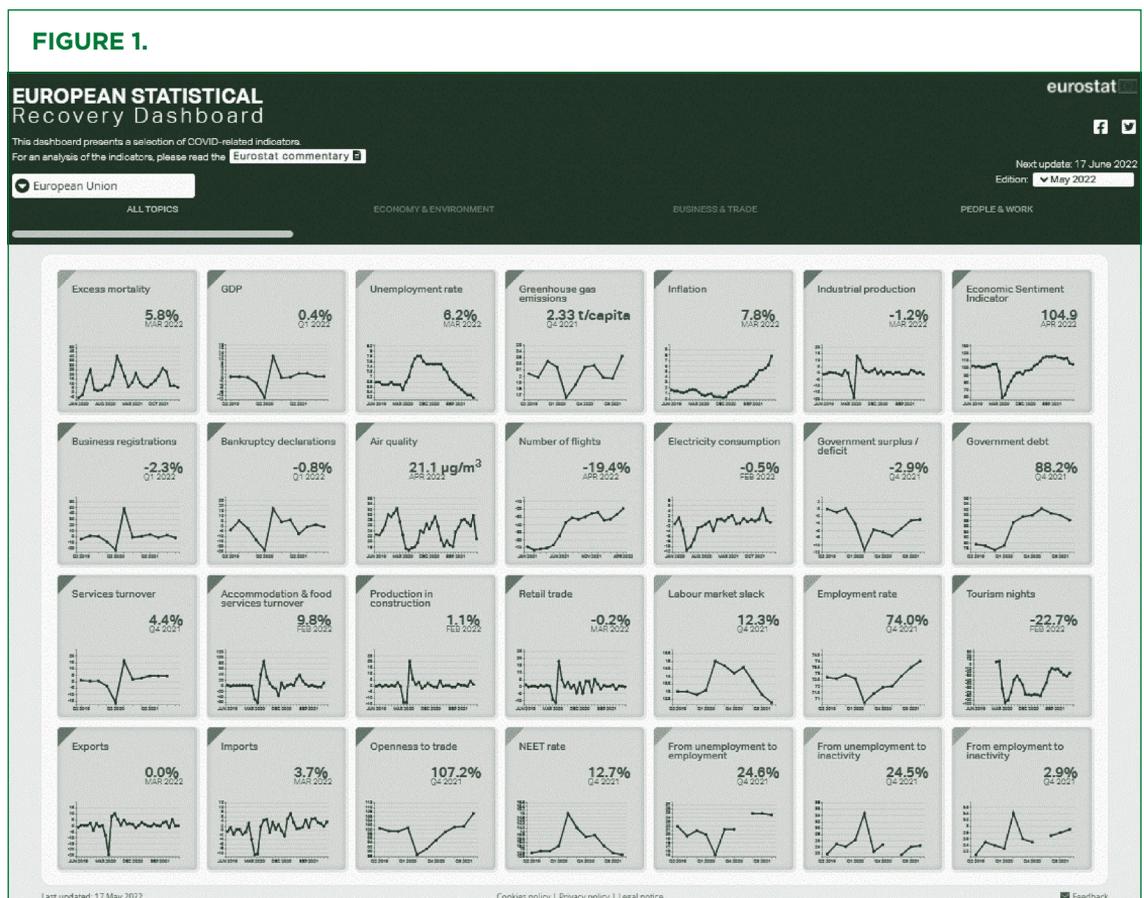
A graph displaying together some indicators and excessive mortality as a background, gives at once an overview on the position with respect to the pre-pandemic and with respect to the peaks in excess mortality. A table highlighting the indicators that are at pre-pandemic levels has

been also added. All those features complement the written analysis with a visual depiction of the recovery.

In order to draft a commentary, data must be frozen at a certain date for the sake of consistency between the data and the commentary. This is why the recovery dashboard is updated monthly, with no continuous update of indicators.

We recognise the value of having access to up to date indicator values, and we make this possible through links from the recovery dashboard's graphs to the source data in the Eurostat data browser. However, freezing the data allows to make a picture of the situation and comparing with the pre-pandemic period. Moreover, having a commentary permits to split data presentation into two levels: the main dashboard page is dedicated to interactive graphs, with the possibility of seeing longer/shorter time series, selecting countries and/or European aggregates to visually compare trends, exploring different data views by topic. In

FIGURE 1.



Source: <https://ec.europa.eu/eurostat/cache/recovery-dashboard/>

the commentary, we can present a multi-indicator analysis, together with data rebased at pre-pandemic levels, we can show graphs with lowest and highest values of indicators across countries at different periods, and we can show which indicators are back at pre-pandemic levels for the European Union, when such a comparison is possible. The user can then freely choose between a fast view of the indicators, or spending some time with analysis and more complex graphs.

A user-friendly tool for indicators' visualization

In developing the recovery dashboard, a key challenge was to design an attractive and appealing visualization tool. Eurostat invested in this direction and the result has been welcomed by users.

The recovery dashboard indicators are accessible either all together from the main page, or organised in three topics: Economy and environment, Business and trade, and People and work.

The user interface is based on linear graphs, giving an immediate image of indicators' trends; it allows the selection of one or more countries, and to keep the same country selection for all charts if so wished. In this way, users can easily compare developments across different countries and with the European aggregates. The user can also enlarge the time span shown in the default view by moving a time sliding banner, in order to display longer time series.

Moreover, the tool offers the possibility of consulting short methodological descriptions of the indicators, of accessing source datasets with downloading facilities for data, and accessing the Eurostat commentary.

Previous editions are retrievable via a menu, and the user is informed when the next update will be published. All graphs are downloadable as images, for example to be inserted in a report, and sharable via the most popular social platforms. Finally, yet importantly, Eurostat took care of guaranteeing a good responsiveness of the tool, and its portability. Eurostat also surveyed users by running a usability test, including in face-to-face interviews, receiving very positive feedback.

Continuous improvement

Eurostat is committed to a continuous improvement of the recovery dashboard. Since December 2020, a number of expansions in terms of coverage and functionalities have been introduced in order to better track the recovery and reflect user's needs, including those expressed in the user survey. The result has been a number of improvements both in indicators coverage and in the visualization tool. Some indicators can now be displayed in different units; this permits to look both at the latest developments, by showing for example the month on previous month growth rate, and to compare with the level before the pandemic, by looking at the index. A number of indicators have been added, and more are expected to become available, in order to keep the content in line with the latest statistical developments. Whilst the update process is completely transparent for the user, it is important to point out that developing and maintaining the recovery dashboard benefits from the contribution of many statisticians, across many statistical domains and including ICT experts, who actively engage and contribute to its improvement. ●

Useful references

- Eurostat page on COVID-19: <https://ec.europa.eu/eurostat/web/covid-19/overview>
- Statistics Explained article: Labour market slack - unmet need for employment - quarterly statistics: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Labour_market_slack_-_unmet_need_for_employment_-_quarterly_statistics
- Statistics Explained article: Hours of work and absences from work - quarterly statistics: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Hours_of_work_and_absences_from_work_-_quarterly_statistics#Impact_of_COVID-19_pandemic_and_potential_recovery