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GDP growth estimates for Europe at 30 days – is that feasible?

Topic 3 – More rapid statistics and indicators on new phenomena

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Introduction

Since 2003, the quarterly GDP estimates for the euro area (EA) and the European Union (EU) have been produced at 45 days after the quarter-end. This abstract summarises how Eurostat with a group of EU Member States has managed to speed up the publication of the earliest GDP estimates for the EA and the EU to 30 days after the quarter-end. By explaining the chosen method, this abstract also addresses the request of the statistical and scientific world to provide transparency and to better understand the development and test process of new statistical products in official statistics, more concretely regarding the new GDP t+30 flash estimation.

Eurostat started investigating the advancement of the first GDP estimate in 2013. The work focused on sharing best practises in compiling early GDP estimates, exchanging information on methods and estimation techniques between Member States, preparing test estimates for the quarters in 2012–2015, developing quality acceptance criteria for assessing the results and developing a communication plan in case of beginning to publish. The work resulted in the first publication of the preliminary GDP flash estimates at t+30 days for the EA and EU on 29 April 2016.

Methods / Problem statement

The research question addressed in the paper is: 'Estimating reliably European GDP at 30 days after the quarter-end – is that feasible?' At the core of the methodology Eurostat uses a sample to population estimator in which the sample is formed by the GDP t+30 estimates of a group of Member States.

The methodology includes a possibility to top-up the sample to population estimate by means of the economic sentiment indicator for the missing part of Member States, in case of a difficult rounding situation to publication growth rate accuracy with one decimal point (i.e. initial sample to population growth estimate ~ x.x5 %). In order to assess the results of the tests that were performed for 16 quarters, three main quality acceptance criteria were defined a priori against which the results were to be tested:

1) The average revision of the GDP t+30 test estimate when publishing GDP t+45 estimate should be in between -0.05 and 0.05 percentage points, and no more than 66.7 % of the revisions should go in the same direction.

2) The average absolute revision to the GDP t+30 estimate growth should be: i) less than or equal to 0.10 percentage points when the t+45 estimate is published; and ii) less than or equal to 0.13 percentage points when the t+65 estimate is published.

3) For the final two quarters of 2015, Eurostat needs to receive estimates from Member States whose GDP account for 70% of total GDP for the euro area and the EU.

Results / Proposed solution

The method developed for producing preliminary flash estimates of quarterly GDP for the EA and the EU 30 days after the quarter-end is in many respects similar to the method currently used for the EA and EU GDP t+45 flash estimates. The main differences are that the t+30 estimates have a slightly limited country coverage and that greater use is made of preliminary country estimates (partially missing data for the 3rd month).

Based on the input of a group of Member States, test estimates for the EA and the EU were compiled for 16 quarters i.e. for 2012Q1–2015Q4. The assessment of results against the pre-defined quality acceptance criteria were:

1) When estimating GDP at t+45, the average revision to the GDP t+30 flash estimates was 0.00 percentage points for the EA and -0.01 percentage points for the EU and the number of revisions in the same direction (plus or minus) remained clearly below the pre-set criterion of 66.7 %.

2) The average absolute revision to the GDP t+30 flash estimates at 45 days was 0.06 percentage points for the EA and 0.05 percentage points for the EU. Furthermore, the average absolute revision at 65 days was also 0.06 percentage points in the EA and 0.05 percentage points in the EU.

3) The coverage in 2015Q3 and 2015Q4 has been above 90% of GDP for both the EA and the EU. Concluding, the test result fulfilled all the quality acceptance criteria.

Conclusions

The good results of the GDP t+30 project (with test estimates showing that only limited revisions have been necessary, and coverage of all test estimates already at a higher level than achieved for the GDP t+45 estimates when they were first released) indicated that the release of GDP estimates for the euro area and the EU can be brought forward to 30 days after the end of the reference period.

Therefore, Eurostat decided in December 2015 to start releasing the GDP estimates for the euro area and the EU at 30 days after the quarter-end, beginning with the first quarter of 2016. The revisions to the first officially published GDP t+30 estimates for 2016Q1 continued to be small and to meet well all the quality acceptance criteria. A large number of Member States contribute to the GDP t+30 estimates for the euro area and the EU by providing their national estimates. Hence, the launching of the preliminary GDP flash estimates around 30 days is seen as an achievement of the whole European Statistical System (ESS). Estimating reliably (enough) the European GDP at 30 days after the quarter-end has proven to be feasible.