

Abstract

Nowcasting GDP for the Baltic States:
A comparative approach in support of official quarterly GDP forecasts

Dan A. Rieser, DG ECFIN, Unit E2

The purpose of this analysis is to make a contribution to GDP nowcasting and thereby to support DG ECFIN's quarterly forecasting process for key macroeconomic variables such as most notably GDP. This will be done by utilising what are known as "nowcasting procedures" and by enhancing existing forecasting techniques.

Building on the work carried out by Rieser (2017) and outlined in EUROSTAT (2017) as well as EUROSTAT (2018, which summarises in a succinct manner key advances made in the area of nowcasting to date), different econometric techniques will be used for nowcasting purposes. These techniques are: Univariate procedures, ARIMA, structural VARs and behavioural econometric models (the latter making use of a parsimonious set of explanatory variables that allow forecasting GDP). The work done by Poissonnier (2017) will be enhanced by choosing a quarterly approach which adds more granularity to the nowcast albeit increasing its complexity at the same time. JDmetra+ can be used to examine existing pattern of seasonality in the data. This nowcasting approach for GDP is envisaged to support the quarterly forecasting process for GDP in DG ECFIN.

The aforementioned econometric techniques will be applied to the Baltic States: Estonia, Latvia and Lithuania. Despite their similarities, structural differences exist among the three states. All three are highly dependent on external financial flows, mainly from EU structural funds. GDP in the Baltic States is hence significantly affected by a long-term structural trend, seasonality, 'cyclicality' as well as a decline and a deceleration and a rebound following the 2007/08 Global Financial Crisis. In a further stage, the analysis can be extended by analysing the interdependences between three countries including lead-lag relationships.

The work is expected to be completed in Q3/2019. R will be used for the implementation of the econometric models.

JEL Classification: E17, C22, C53

References

EUROSTAT (2018): *Handbook on Seasonal Adjustment*, published by Eurostat, ISBN: 978-92-79-80170-9, Digital Object 10.2785/279605, May 2018.

EUROSTAT (2017): *Preliminary report on a review of current GDP nowcasting procedures within the PEEI publication*, a report published in cooperation with SOGETI by Ben Norwood and Rebecca Killick from Lancaster University under contract no. ESTAT 04241.2016.001-2016.785 "Database Management and Research Activities related to the production of Principal European Economic Indicators (PEEIs)", June 2017.

Poissonnier (2017): *Forecast validation tool manual*, available online at: <https://connected.cnect.cec.eu.int/groups/ecfin-forecast-validation-tool>, see and Ref. Ares(2017)2318282 - 05/05/2017.

Rieser (2017): *Nowcasting GDP: Identification of methods to complement the t+30 approach in official statistics*, presentation at the Royal Statistical Society 2017 annual conference, Glasgow, 04/09/2017 – 07/09/2017.