

Working Papers - Output Gap Measurement after COVID for Colombia: Lessons from a Permanent - Transitory Approach

Download Keep in mind

The series Working Papers on Economics is published by the Office for Economic Studies at the *Banco de la República* (Central Bank of *Colombia*). It contributes to the dissemination and promotion of the work by researchers from the institution. This series is indexed at Research Papers in Economics (RePEc).

On multiple occasions, these works have been the result of collaborative work with individuals from other national or international institutions. The works published are provisional, and their authors are fully responsible for the opinions expressed in them, as well as for possible mistakes. The opinions expressed herein are those of the authors and do not necessarily reflect the views of Banco de la República or its Board of Directors.

AUTHORS AND/OR EDITORS Parra-Amado, Daniel Granados-Castro, Joan Camilo

The series Working Papers on Economics contributes to the dissemination and promotion of the work by researchers from the institution. On multiple occasions, these works have been the result of collaborative work with individuals from other national or international institutions. This series is indexed at Research Papers in Economics (RePEc). The opinions contained in this document are the sole responsibility of the author and do not commit Banco de la República or its Board of Directors.

Publication Date: Tuesday, 7 of January 2025 **Abstract**

We estimate the output gap for the Colombian economy explicitly accounting for the COVID-19 period. Our estimates reveal a significant 20% decline in the output gap but with a faster recovery compared to previous crises. Our empirical strategy follows a two-stage Bayesian vector autoregressive (BSVAR) model where i) a scaling factor in the reduced form of VAR is used to model extreme data, such as those observed around the COVID-19 period, and ii) permanent and transitory shocks are structurally identified. As a result, we obtain that a single structural shock explains the potential GDP, while the remaining shocks within the model are transitory in nature and thus can be used to estimate the output gap. We elaborate on the relative strengths of our method for drawing policy lessons and show that the improved approximation accuracy of our method allows for inflation forecasting gains through the use of Phillips curves, as well as for rule-based policy diagnostics that align more closely with the observed behavior of the Central Bank.

The findings show that the output gap in Colombia fell by 20% in the second quarter of 2020 due to the pandemic, but it recovered quickly, unlike previous crises.