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The updated 4GM explicitly incorporates the unemployment rate and wages as central variables for the analysis of inflation and monetary policy in Colombia.

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Approach

This study updates the 4GM model used by Banco de la República (the Central Bank of Colombia) for monetary policy analysis. The update explicitly incorporates labor?market dynamics, including the evolution of the unemployment rate and wages. The aim is to capture how labor?market conditions interact with economic activity and inflation in Colombia.

Contribution

The new model (4GM+LM) allows for a joint analysis of unemployment, wages, economic growth, and inflation. This enhances the ability to identify the sources of inflationary pressures, distinguish between supply and demand shocks, and assess the degree of slack in the economy — even during periods in which labor?market dynamics and economic growth behave atypically, as observed during the COVID?19 pandemic.
The document provides a more comprehensive analytical tool for economic policy makers.

Results

Estimates from the 4GM+LM model show that wage and unemployment shocks may have significant and persistent effects on inflation and economic activity. The model quantifies the monetary policy response to these shocks. Furthermore, the model evaluation suggests improved predictive performance relative to its predecessor, capturing the high persistence of unemployment in Colombia and the role of the minimum wage as a key factor shaping overall wage dynamics. Finally, the historical analysis conducted with the model illustrates how different shocks (such as the global financial crisis, the fall in oil prices, and the pandemic) affected economic activity, unemployment, and prices in Colombia, as well as the corresponding monetary policy response in each case.