



[Tracking the Slowdown in Long-Run GDP Growth](#)

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The slow pace of the recovery from the Great Recession of 2007-2009 has prompted questions about whether the long-run growth rate of GDP in advanced economies is lower now than it has been on average over the past decades. As emphasized by Orphanides (2003), real-time misperceptions about the long-run growth of the economy can play a large role in monetary policy mistakes. Moreover, small changes in assumptions about the long-run growth rate of output can have large implications on fiscal sustainability calculations (Auerbach, 2011). This calls for a framework that takes the uncertainty about long-run growth seriously and can inform decision-making in real time.

In this paper, we present a dynamic factor model (DFM) which allows for gradual changes in the mean and the variance of real output growth. By incorporating a broad panel of economic activity indicators, DFMs are capable of precisely estimating the cyclical comovement in macroeconomic data in a real-time setting. Our model exploits this to track changes in the long-run growth rate of real GDP in a timely and reliable manner, separating them from their cyclical counterpart.

Applying our model to US data, we document that long-run real GDP growth declined meaningfully during the 2000's and currently stands at about 2%, more than one percentage point lower than the postwar average. Our evidence is supportive of the view that most of this slowdown occurred prior to the Great Recession.

When applied to real-time vintages of data, the model is capable of detecting the fall from the beginning of the 2000's onwards, and by the summer of 2010 it reaches the significant conclusion that a decline in long-run growth is behind the slow recovery, well before conventional structural break tests become conclusive.

Finally, we extend our framework to disentangle the drivers of secular fluctuations of GDP growth, by decomposing long-run output growth into labor productivity and labor input trends. The results of this decomposition exercise point to a slowdown in labor productivity as the main driver of recent weakness in GDP growth. Applying the model to other advanced economies, we provide evidence that the weakening in labor productivity appears to be a global phenomenon.