

AUGUST 2016 | NUMBER 58

Fiscal Sentiment and the Weak Recovery from the Great Recession

A Quantitative Exploration

BY FINN E. KYDLAND, UNIVERSITY OF CALIFORNIA, SANTA BARBARA, AND
CARLOS E. J. M. ZARAZAGA, FEDERAL RESERVE BANK OF DALLAS

More than six years after the trough of the Great Recession of 2008–2009, the weakness of the U.S. economic recovery still poses a riddle for the standard model that economists use to understand economic growth. In this model, the further output falls below its steady-state level, the stronger the rebound. Particular shocks could delay a strong rebound, but it has proved difficult to identify plausible shocks with such a delaying effect in the aftermath of the Great Recession. The innovations that brought productivity below trend during that episode died down fairly quickly, to the point that productivity was at or above trend soon after the recovery started. Likewise, the improvement in financial conditions that followed their sharp deterioration during the Great Recession has the similar effect of predicting a considerably stronger recovery of output and hours worked than observed in the data.

The conclusion that the standard growth model cannot account for the weak expansion that followed the Great Recession seems premature, however, because the deep recession and following anemic recovery were accompanied by record peacetime fiscal deficits and public debt, along with projections of a significant rise in government spending in coming decades. The counterfactual prediction of

the model might disappear once it explicitly accounts for the prospect that the fiscal imbalances that predated the Great Recession—aggravated and made apparent by it—would ultimately be corrected with tax increases.

It seems reasonable to speculate that, in light of those fiscal realities, households and businesses started to make their decisions in the wake of the Great Recession as if convinced that a switch to a higher taxes regime would soon happen. After all, the unprecedented measures implemented during and after the 2008–09 crisis may have appeared to be part of fiscal and monetary policy regimes substantially different from those of the past.

Our research examines the quantitative relevance of this conjecture, referred to hereafter as the “fiscal sentiment” hypothesis, which contrasts with the view of interpretations that slow recovery reflected sudden and out-of-the-blue “gloomy consumer sentiment.” Concretely, we ask what economic outcomes should have been observed in the early years of the recovery from the Great Recession, specifically over the period 2009–2013, if economic agents had been making their consumption, employment, and investment decisions at that point with the belief that a switch to higher taxes was imminent. The comparison of those predictions with the evidence can help assess the

quantitative plausibility of the fiscal sentiment hypothesis.

Our work implements those comparisons with a growth model calibrated to long-run features of the U.S. economy and with a higher tax configuration that captures the Congressional Budget Office's assessment of the U.S. fiscal situation. We study separately the prospect of higher taxes on labor income and on capital income. The two cases have very different implications for the fiscal sentiment hypothesis. In particular, the paper shows that the hypothesis is validated by the prospect that the higher tax rates would fall on capital rather than labor income.

Intuitively, the anticipation of higher taxes on labor income will induce households to substitute less leisure today for more leisure in the future, when work in market activities will be taxed more heavily. As a result, labor input and output should increase in the transition between the time households foresee the change of regime and the time it is implemented, the opposite of what occurred during the recovery from the Great Recession.

On the other hand, the predictions of the model under higher capital income taxes are, in principle, consistent with the evidence. The perception that the returns on capital will be taxed more heavily in the near future leaves the capital stock at a higher than desired level. Households therefore let the capital stock depreciate by not investing as much as under the previously lower capital income tax regime. Without the need to produce as many investment goods, households consume more leisure and work less. Investment, labor input, and output decline. At the same time, the prospects of lower after-tax returns on investment induces households to shift a larger share of their expenditures to consumption, which as a result may temporarily rise as output, labor input, and investment fall.

Our main finding is that, provided the higher tax rates are expected to fall on capital income, the fiscal sentiment hypothesis can account for a substantial fraction of the weakness of investment, labor input, and output during at least the first four years after the trough of the Great Recession. This quantitative assessment is reached by defining the "gap" in a variable of interest as the difference between its actually observed level in a given year of the period under study and what the model predicts would have been

observed in the absence of the U.S. fiscal imbalances that motivate the fiscal sentiment hypothesis.

According to the model, by this measure the fiscal sentiment hypothesis in the higher capital income tax rate scenario can account for at least two thirds of the investment gap. The comparable figure for the labor input gap is between one and two thirds. The latter are remarkably large fractions, taking into account that models that abstract from fiscal policy and consider financial shocks in isolation predict, as mentioned earlier, that labor input should have rebounded back to its pre-recession trend in the early stages of the recovery from the Great Recession. Moreover, when taken together, the weakness of investment and labor input just described imply that the model can account for at least one third of the output gap during the recovery.

As hinted at above, the distinctive dynamics of consumption during the recovery predicted by the fiscal sentiment hypothesis is particularly critical for validating or dismissing its empirical relevance in the higher capital income tax scenario. For the intuitive reasons provided earlier, the hypothesis implies that consumption might have risen as output was falling in the first stages of that recovery. Interestingly enough, our results find that the consumption gap was positive during the first few years of the seemingly impaired expansion under study.

Overall, therefore, our findings suggest that the standard framework for studying economic growth can account for a significant fraction of the weak recovery from that traumatic economic contraction. This conclusion rests on the assumption that, in light of the Congressional Budget Office's assessment of the fiscal situation around the time of the Great Recession, economic agents then began anticipating a substantial increase in capital income taxes.

NOTE:

This research brief is based on Finn E. Kydland and Carlos E. J. M. Zarazaga, "Fiscal Sentiment and the Weak Recovery from the Great Recession: A Quantitative Exploration," *Journal of Monetary Economics* 79 (May 2016): 109–25. The views expressed in this paper do not necessarily reflect those of the Federal Reserve Bank of Dallas or the Federal Reserve System.