Journal of Monetary Economics 79 (2016) 109–125

Contents lists available at ScienceDirect

Journal of Monetary Economics

journal homepage: www.elsevier.com/locate/jme

Fiscal sentiment and the weak recovery from the Great Recession: A quantitative exploration

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ARTICLE INFO

Article history:
Received 26 December 2012
Received in revised form
6 February 2016
Accepted 15 March 2016
Available online 25 March 2016

Keywords:
US economy
Great Recession
Neoclassical growth model
Tax regime switch
Transitional dynamics

ABSTRACT

The US economy has not recovered from the Great Recession as strongly as predicted by the neoclassical growth model, even after incorporating a variety of frictions to it. The paper explores quantitatively the hypothesis that the counterfactual predictions are mostly the result of ignoring the expectations of higher taxes prompted by unprecedented fiscal challenges faced by that country in peacetime. The main finding is that this fiscal sentiment hypothesis can account for a substantial fraction of the decline in investment and labor input in the aftermath of the Great Recession, provided the perceived higher taxes fall almost exclusively on capital income.

1. Introduction

Even six years after the trough of the Great Recession, the US economic recovery continued to disappoint. It should have been considerably stronger by the standards of prior recessions of significant depth. The fact that it has not has led some to question the abstraction of reality proposed by well-established economic models that lend support to that prediction.

The inability to account for the anemic recovery from the Great Recession is particularly noticeable in models that introduce a variety of real (as opposed to nominal) frictions and shocks in the basic analytical framework of the neoclassical growth model. As is well-known, built into that class of models is a "rubber band" effect, by virtue of which the further output falls below its steady-state level, the stronger is the subsequent rebound to it, unless particular realizations of shocks to the economy prevent that from happening. It has not proved easy, however, to identify shocks with such a "delaying effect" in the recovery, even in versions of the neoclassical growth model that introduce financial frictions in the analysis, such as the one considered by Jermann and Quadrini (2012). Their indicator of financial market conditions successfully accounts for a large fraction of the sharp economic contraction observed during the Great Recession, but the almost immediate subsequent improvement of that same indicator also implies a counterfactually strong recovery.

The failed attempts, so far, to account for the weak recovery from the Great Recession as the outcome of the unique Walrasian competitive equilibrium implied by the canonical neoclassical growth model seems to have convinced prominent members of the economics profession that radical departures from that analytical framework are needed to account for the phenomenon under study.[1] Other equally prominent scholars have argued, however, that the ability of that analytical

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[1] Eggertsson and Mehotra (2014) is fairly representative of this view.

http://dx.doi.org/10.1016/j.jmoneco.2016.03.002
0304-3932/

framework to account for the anemic post-Great Recession recovery should not be dismissed before properly incorporating into it unprecedented developments on the fiscal front that, at least in the US, accompanied that downturn: record high fiscal deficits and levels of public debt during peacetime, along with projections of a significant structural rise in that country's government transfers in coming decades.

Such is the conjecture offered by Lucas (2011) in his concise and eloquent interpretation of the lack of dynamism that characterized the US economy in the wake of the Great Recession:

> *A healthy economy that falls into recession has higher than average growth for a while and gets back to the old trend line. We haven't done that. I have plenty of suspicions but little evidence. I think people are concerned about high tax rates… But none of this has happened yet. You can't look at evidence. The taxes haven't really been raised yet."*

It is fairly obvious that the hypothesis advanced by Lucas must refer to higher *distortionary* taxes, as higher lump-sum taxes would not have any effect on allocations and couldn't be responsible, therefore, for inducing any deviation of the economy from its previous trend. As reflected in its title, the paper refers to this specific conjecture about the role of higher prospect distortionary taxes in the allegedly slow US economic recovery from the Great Recession as the "fiscal sentiment hypothesis," to differentiate it from "consumer sentiment" or self-fulfilling beliefs (sunspots) interpretations of the same phenomenon, such as that proposed by Farmer (2012).

The motivation for exploring the *quantitative* relevance of the fiscal sentiment hypothesis pursued in this paper came, however, from the observation that it is not quite true that it is not possible to look at the evidence to validate or dismiss the hypothesis before the taxes have been actually raised. Lucas himself has pioneered techniques designed to do precisely that. Specifically, those techniques can be used to produce rather stark predictions about the economic outcomes that should be observed during the recovery from the Great Recession if economic agents indeed started to make their consumption, employment, and investment decisions near the trough of that episode as if convinced that a higher-taxes regime would be in place soon. The comparison of those predictions with the evidence can be used in principle to assess the quantitative plausibility of the fiscal sentiment hypothesis.

That is precisely what the paper sets out to do, equipped with a properly adapted version of the neoclassical growth model, arguably the analytical framework that Lucas had in mind in his brief characterization of the fiscal sentiment hypothesis.

The model predictions-data comparison proposed above would have been problematic with an off-the-shelf neoclassical growth model, however, because the typical closed economy version of that model will unavoidably underestimate the level of consumption and/of investment, which do contain an additional "net import" component in the actual economy. The paper addresses this lack of correspondence between variables in the model and their empirical counterparts by (1) adding to an otherwise rather conventional neoclassical growth model an external-like sector in the manner proposed by Trabandt and Uhlig (2011), and (2) implementing an updated version of the "private sector output" approach to measuring the actual economy pioneered by Gomme and Rupert (2007), who argue that it delivers a better correspondence between the data and models that assume that observed aggregates reflect the optimizing behavior of households and firms. In addition, quantitative discipline is imposed in the analysis by (1) calibrating the model to long-run features of the economy prior to the Great Recession, and (2) restricting the perceived forthcoming higher-taxes regime that could be plausibly considered to those that capture the Congressional Budget Office's assessment of the US fiscal situation at the early stages of the recovery from that episode.

Overall, the findings of the paper offer enough reasons to keep the prospect of higher taxes in the list of suspects potentially responsible for slowing down the economic recovery from the Great Recession, provided the higher taxes fall on capital income. The anticipation that the higher taxes will fall on labor income produces counterfactual predictions, as theory would have suggested.

More precisely, in a benchmark higher-capital-income-tax scenario considered by the paper, the fiscal sentiment hypothesis accounts approximately for between two-thirds and all of the decline of gross private domestic investment during the recovery from the Great Recession, relative to what should have been its normal level by the criterion established in this paper. The hypothesis under exploration can also account approximately for between one-third and two-thirds of the analogous decline in the labor input absorbed by private sector firms. The corresponding figures for an alternative higher-capital-income taxes scenario are lower, but still sizable.

Although the performance of the model along the labor market dimension appears to be less satisfactory, it is worth emphasizing, as discussed in Section 3, that this might reflect the methodological discipline of not letting the rather low values of labor input observed during the recovery influence the identification of its underlying trend. The model also predicts above-trend consumption, as in the data, with some overshooting at the beginning that probably reflects the fact just mentioned that labor input, and therefore output, don't fall as much in the model as in the data.

The observation that aggregate consumption has been above trend in the US during the rebound from the Great Recession may come as a surprise given the widespread perception to the contrary. It is the result, however, of two features of the US economy typically ignored in popular accounts of the phenomenon under study. First, consumption has been propped up for many years by unusually large trade deficits that only after the Great Recession started to show signs of slowly reverting to their historical mean. Second, the paper points out that many estimates of the potential output have grossly overestimated historical trends by ignoring that transitional dynamic effects present in that country's labor markets have lifted US growth rates for many decades above those