Journal of Economic Dynamics & Control 37 (2013) 2307–2321

Contents lists available at ScienceDirect

Journal of Economic Dynamics & Control

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

Pushing the limit? Fiscal policy in the European Monetary Union

Betty C. Daniel [a,*], Christos Shiamptanis [b]

[a] Department of Economics, University at Albany, Albany, NY 12222, USA
[b] Department of Economics, Wilfrid Laurier University, Waterloo, ON, Canada N2L 3C5

ARTICLE INFO

Article history:
Received 17 October 2011
Received in revised form
6 March 2013
Accepted 28 May 2013
Available online 14 June 2013

JEL classification:
C32
C33
E42
E62
F33

Keywords:
European Monetary Union
Fiscal policy
Fiscal limits
Panel cointegration
Error correction

ABSTRACT

Governments are confronted with the growing realization that they face fiscal limits on the size of debt and deficits relative to GDP. These fiscal limits invalidate Bohn's criterion for fiscal sustainability, which allows explosive debt relative to GDP, eventually violating any fiscal limit. We derive restrictions on a fiscal rule, necessary for the government to eliminate explosive behavior. These restrictions require that the response of the primary surplus to debt be relatively strong, and that the primary surplus be cointegrated with both debt and output. We test these empirical implications for a panel of eleven EMU countries, and find that they are satisfied, implying that fiscal policy does not create explosive behavior.

© 2013 Elsevier B.V. All rights reserved.

1. Introduction

Fiscal authorities are facing renewed scrutiny over government debt and deficits following the worldwide recession and financial crisis that began in 2007. The scrutiny has been especially intense in European Monetary Union (EMU) countries, where fiscal problems have threatened the value of the Euro, and raised the specters of both sovereign default and a breakup of the monetary union. What is "responsible" fiscal policy, and have countries in the EMU been following such a policy?

The design of responsible monetary policy has received much more attention than that of responsible fiscal policy. Monetary policy is typically specified as a rule, often a Taylor Rule, and alternative policies involve consideration of alternative specifications of the rule. Leeper (2010) argues that we need to place fiscal policy under the same scrutiny. Specifically, we need to specify fiscal policy as a rule, determine criteria for the fiscal rule to be responsible, and test whether countries meet those criteria.

* Corresponding author. Tel.: +1 518 442 4747.
E-mail addresses: bdaniel@albany.edu (B.C. Daniel), cshiamptanis@wlu.ca (C. Shiamptanis).

0165-1889/$ - see front matter © 2013 Elsevier B.V. All rights reserved.
http://dx.doi.org/10.1016/j.jedc.2013.06.003

A responsible fiscal rule must be sustainable. Early tests of fiscal sustainability (Hamilton and Flavin, 1986; Wilcox, 1989; Trehan and Walsh, 1991) focused either on determining whether debt was stationary or on cointegration between government debt and the primary surplus as indicative of whether current fiscal policy satisfied the intertemporal budget constraint, and hence was sustainable. However, Bohn (2007) argued that sustainability tests based on cointegration were unnecessarily restrictive. This is because a fiscal policy could be sustainable with a growing gap between government debt and the primary surplus, in violation of cointegration. He demonstrates that the government's intertemporal budget constraint is expected to hold under a fiscal rule in which the primary surplus adjusts by any positive amount to lagged debt. Therefore, Bohn (1998, 2008) claims that a fiscal policy, characterized as a rule with the primary surplus responding positively to lagged debt, is sustainable.

However, Bohn's (1998, 2008) definition of fiscal sustainability clashes with the new and growing literature on fiscal limits (Davig et al., 2010, 2011; Davig and Leeper, 2011; Cochrane, 2011; Daniel, 2010; Daniel and Shiamptanis, 2012; Sims, 1997). This literature recognizes that there is an upper bound on the value of the primary surplus that a country can raise. A fiscal limit is in part due to the Laffer Curve; since taxes are distortionary, there is an upper bound on the level of taxes a country can raise (Trabandt and Uhlig, 2011). It also arises due to political will. There is an upper bound on a country's willingness to tax itself and a lower bound on expenditures on public goods. In the presence of these fiscal limits, explosive debt and primary surpluses, which satisfy the intertemporal budget constraint, do not represent equilibrium paths because they will eventually violate any upper bound. Therefore, a responsible fiscal rule must do more than satisfy the government's intertemporal budget constraint. It must also rule out explosive behavior of debt and the primary surplus relative to GDP. Bohn (2007) acknowledges that his analysis abstracts from fiscal limits. Our paper can be viewed as an extension of Bohn, necessary when countries face fiscal limits.

We define a responsible fiscal rule as satisfying the government's intertemporal budget constraint and ruling out explosive behavior. We specify a simple fiscal policy rule, analogous to the Taylor Rule for monetary policy, and derive the restrictions on parameters necessary for the fiscal rule to be responsible. Satisfaction of the intertemporal budget constraint requires that the primary surplus respond positively to lagged debt, as in Bohn (1998, 2008). Ruling out explosive behavior adds the requirement that the debt and primary surplus eventually stabilize relative to output. Together these restrictions require that a responsible fiscal rule yield a globally stable system.[1]

We derive two empirically testable criteria which a responsible fiscal rule must satisfy. The first is that the magnitude of the responsiveness of the primary surplus to lagged debt must be large enough to yield global stability. The second is cointegration. Since the primary surplus and debt are expected to reach a long-run equilibrium in a globally stable model, consideration of non-explosive behavior, required by fiscal limits, restores cointegration between the primary surplus and debt as a necessary requirement for a responsible fiscal rule. When the fiscal rule must satisfy the intertemporal budget constraint in addition to ruling out explosive behavior, the requirement for cointegration is not unnecessarily strong.

We conduct tests to assess our two empirically testable criteria, using annual data on real debt, real primary surpluses, and real GDP for a panel of eleven EMU countries over the period 1970–2011. We find that fiscal policy was adequately responsive to increases in debt, and that the data exhibits the required cointegration to imply that the fiscal rule has been responsible in our panel of eleven EMU countries.

A fiscal rule which satisfies our criteria for responsibility is necessary, but not sufficient, for fiscal solvency for two primary reasons. First, a responsible fiscal rule eliminates explosive behavior of debt as long as the government can achieve the primary surplus mandated by the rule. Stochastic shocks could send debt so high that the surpluses, mandated by fiscal rule which brings debt back down, would violate fiscal limits and are therefore infeasible (Daniel and Shiamptanis, 2012). At the fiscal limit, the government cannot raise surpluses further to continue its responsible fiscal rule. Agents refuse to lend, creating a solvency crisis.[2]

Second, any test based on historical data is necessarily backward-looking. Politicians can make future promises, unrelated to current values of the primary surplus and debt, which are insolvent, and find themselves unable to borrow to carry out those plans. Davig et al. (2010, 2011) are concerned about unfunded future liabilities due to age-related spending. Historical data does not capture this kind of future plan. Current projections for future debts levels are so high that if agents truly believed that no adjustments would be make to deal with the unfunded liabilities, then governments would be insolvent in spite of having followed a responsible fiscal rule in the past.

Therefore, a county following a responsible fiscal rule could still encounter solvency problems due to negative shocks or due to future plans which are insolvent. However, a country following a fiscal rule which is not responsible will encounter solvency problems with certainty.[3] This is what we seek to determine with our tests. We are testing for responsibility which requires non-explosive behavior of government debt and the primary surplus relative to GDP.

[1] Davig (2005) also argues that global stability is necessary for a sustainable fiscal policy in the context of an empirical Markov switching model. His model has two regimes, one with expanding debt and one with shrinking debt. The government's intertemporal budget constraint is satisfied as long as periods of expanding debt are offset by periods of shrinking debt so that the system is globally stable.

[2] Polito and Wickens (2012) have similar objectives. They evaluate the future fiscal stance of current policy by determining whether the forecast debt/GDP ratio over a particular horizon, using VAR, is consistent with a target debt/GDP ratio. They use a VAR to forecast future debt, rather than a fiscal rule. They are interested in the measure of fiscal stance whereas Daniel and Shiamptanis (2012) are interested in fiscal solvency.

[3] If we found irresponsible fiscal rules in countries which were borrowing, then creditors must have been expecting future policy change, something we cannot detect in historical data. This would be analogous to a finding of nonsustainability in the earlier literature.

Download English Version:

https://daneshyari.com/en/article/5098734

Download Persian Version:

https://daneshyari.com/article/5098734

Daneshyari.com