Extended abstract

The public economics literature has shown that the economic cycle has important short-term effects on public finances through the operation of automatic stabilisers. These effects have to be taken into account when assessing the “structural” position of the budget balance, which therefore needs to be measured as a necessary step towards the evaluation of the fiscal policy and its effect on economic activity.

The cyclically-adjusted budget balance (CAB thereafter) became mostly important in the creation of the European Monetary Union, as the adoption of a single currency required a strict surveillance of the development of member countries’ fiscal policies. Having in mind that economic fluctuations have a temporary impact on fiscal figures, it soon became clear that nominal budget figures could not be taken at face value as they

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1 See the seminal paper by Blanchard (1990), and the attempts to evaluate fiscal policy over the business cycle provided by Buti et al. (1997 and 1998). Dalsgaard and Seres (1999), Bouthevillain et al. (2001) and Camba-Mendez and Lamo (2002) use alternative approaches to extract the temporary component of the budget balance. Kremer et al. (2006) present a disaggregated framework for the analysis of past and projected structural developments in the most relevant revenue and expenditure categories and the fiscal balance.
concealed two types of factors—temporary and permanent. Thus, measuring and targeting the CAB was recognized as a crucial step in order to ensure long-term sustainability while at the same time allowing automatic stabilisers to dampen cyclical fluctuations, and to measure the impact of discretionary fiscal policy on both the budget and aggregate demand (Marino et al., 2008, show how calculating the structural budget balance for Italy implies a substantial reassessment of the country fiscal stance over the period 1998-2007). The CAB became such an important device for fiscal surveillance that it was officially included in the provisions of the reformed Stability and Growth Pact of 2005 (European Commission, 2006).\footnote{The identification of temporary influences, other than those stemming from the cycle, on budgetary statistics also requires the calculation of fiscal figures net of one-offs and temporary measures, which were clearly specified by the amended provisions of the SGP (see European Commission, 2006).}

As the CAB started to play a crucial role for deriving concrete policy conclusions, it attracted an increasing degree of attention which revealed a number of shortcomings (see Larch and Turrini, 2009 for a complete review on these shortcomings).

This paper deals with one of the practical issues raised by the every day use of the CAB, namely the hypothesis that the elasticities with respect to the output gap of budgetary items, i.e. revenues and expenditures, and consequently the budget balance, are constant over time. While this assumption is used as a low-cost working short-cut to measure the CAB, its weakness is widely recognized (see European Commission, 2007).

To tackle this weakness, we employ Markov-switching regression methods in order to allow budgetary items elasticities to vary over the business cycle when estimating the impact of fiscal policy. More specifically, to take into account the feedback from the level of output to the budget balance, we estimate a structural VAR including the output level along with fiscal variables such as government revenues and expenditures.
Structural shocks are identified by following the approach pioneered by Blanchard and Perotti (2002). They argue that, when quarterly data are used, the fiscal variables can be considered as exogenous with respect to the output changes. This allows the estimation of the contemporaneous effect of output changes on fiscal variables as if it was only due to automatic stabilizers, and to calculate tax elasticities to output from institutional information. We follow the same steps, but we differentiate our analysis by allowing for regime shifts in the regression of unexpected changes in taxes and spending on output. This will result in the estimation of different elasticities over different phases of the business cycle.

We then estimate a tri-variate MSVAR where structural shocks are recovered using the procedure sketched above, and where regime shifts are allowed for in order to capture the possible residual regime-dependent relationship between revenues and spending structural shocks.

We apply our analysis to G7 economies.

The objective of this work is twofold. Firstly, we intend to verify whether the variation of fiscal variable elasticities with respect to output is significant. We do this by employing a different estimation technique with respect to those currently in use in international organization (see Larch and Turrini, 2009 for a survey). Secondly, we aim to understand whether considering time varying elasticities is significant when assessing the impact of fiscal policy shocks on economic activity.

In this respect, we believe our study improves on the existing literature about the effects of fiscal policy shocks.

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3 See Giordano et al. (2008) for an application of this approach to the Italian fiscal policy.

4 Blanchard and Perotti (2002) themselves find that tax elasticities are time-varying.
References


