

# **Balanced-Budget Rules and Aggregate Instability: The Role of Consumption Taxes in a Monetary Economy**

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## **Summary**

In the context of the recent economic downturns in Western developed economies, it is recognized that both the fiscal and monetary authorities are working together to keep their economies from falling into deeper recessions. On the fiscal side, balanced budget fiscal rules have been strongly proposed. On the monetary side, both in the US and in Europe, central banks are pursuing extremely expansionary monetary policies to keep interest rates at record low levels. This is to alleviate the detrimental effects of severe contractionary fiscal policies on the real macroeconomy.

Existing macroeconomic literature has focused on analyzing the stability of balanced budget rules (BBR) on the fiscal side. The stabilization roles of factor income taxes and the consumption taxes are fully explored in the one-sector neoclassical growth model. From the stability perspective, it seems that replacing (to some extent income) taxes with consumption taxes is the direction to go (Giannitsarou, 2007). It is noted that all the above analysis of BBR are cast within a real macroeconomic setting so that monetary factors are not present.

In this paper, we study whether a balanced-budget consumption-tax rule is dynamically stable in a monetary economy. Specifically, we extend the Giannitsarou (2007) analysis to a monetary setting by imposing a standard cash-in-advance (CIA) constraint on consumption goods. We find that, in the presence of a monetary distortion, saddle-path stability is no longer a necessary outcome for the balanced-budget consumption-tax rule. In this case, macroeconomic stability depends on the parameterization of the model, especially the coefficients used for the intertemporal elasticity of substitution in consumption, the wage elasticity of labor supply and the degree of money expansion. In a calibration exercise, we examine the effects of monetary growth on dynamic stability under non-linear taxation. If monetary policy is over expansionary (say the money growth rate goes up to 60%), then the majority of the OECD countries fall into the indeterminacy region.