Aggregate instability under balanced-budget consumption taxes: A re-examination

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Abstract

We re-examine the destabilizing role of balanced-budget fiscal policy rules based on consumption taxation. Using a one-sector model with infinitely-lived households, we consider a specification of preferences derived from Jaimovich (2008)\textsuperscript{[14]} and Jaimovich and Rebelo (2009)\textsuperscript{[15]} which is flexible enough to encompass varying degrees of income effect. When the income effect is not too large, we show that there exists a Laffer curve, which explains the multiplicity of steady states, and that non-linear consumption taxation may destabilize the economy, promoting expectation-driven fluctuations, if the elasticity of intertemporal substitution in consumption is sufficiently larger than one and the tax rate is counter-cyclical with respect to consumption. Numerical illustrations also show that consumption taxation may be a source of instability for most OECD countries for a wide range of structural parameters’ configurations. We finally prove the robustness of our conclusions if we consider a discrete-time setup.

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1. Introduction

Balanced-budget rules recommendations to governments are a recurrent subject of controversies among economists and politicians. In the recent years, the financial crisis has generated a strong revival of interest of this debate through its consequences in terms of government debt sustainability. Some countries, characterized by too large debt and public deficits, are constrained to borrow on the financial markets against excessively high interest rates and this generates an increasing debt burden. In Europe, this has been experienced by several countries, starting with Greece, but US faces the same kind of difficulties. These concerns related to the solvability of public debt also enforce governments to reduce their deficits and implement public policies characterized by a balanced-budget.

From a theoretical point of view, several arguments have been considered in favor or against balanced-budget fiscal policy rules. In their seminal contribution, Schmitt-Grohé and Uribe [30] focus on the fact that balanced-budget rules may induce belief-driven aggregate instability. Considering an economy with infinitely-lived households, their basic model introduces a proportional tax on labor income. Since public expenditures are assumed to be constant, the tax rate is counter-cyclical with respect to labor income, which is shown to be a source of endogenous fluctuations.1

The economic intuition relies on self-fulfilling expectations. If households expect a higher tax rate in the future, they will reduce their labor supply, which has a negative effect on capital returns. This mechanism affects at the same time the marginal utility of wealth in such a way that households also currently supply less labor. Since the labor tax rate is counter-cyclical, it becomes larger. Expectations are then self-fulfilling if the decrease of labor through time is in accordance with the intertemporal choice of households.

Contributing to this debate, Giannitsarou [8] argues that consumption taxation should be preferred to income taxation. As in Schmitt-Grohé and Uribe [30], she assumes a balanced-budget rule with a constant level of public spendings, but entirely financed by consumption taxation, and she shows that saddle-path stability always prevails.2 Therefore, she suggests that a government running policies with a stabilization target should increase the share of public spendings financed by consumption taxation.

Although Schmitt-Grohé and Uribe [30] and Giannitsarou [8] show that the (de-)stabilizing impacts of labor income and consumption taxations are opposite, both tax rates introduce a similar distortion, which affects the price of leisure in terms of the consumption good. An increase in either the labor income or the consumption tax rate decreases the relative price of leisure, reducing both labor supply and consumption through an intratemporal substitution effect. As mentioned previously, this may generate expectation-driven fluctuations and aggregate instability. In the case of consumption taxation, the decrease of consumption also implies an increase of the labor supply through an intratemporal income effect. When this latter effect is sufficiently large with respect to the former, any instability due to self-fulfilling expectations is ruled out. This explains the clear-cut conclusions obtained by Giannitsarou [8] in the cases of additively-separable and King, Plosser and Rebelo [18] (KPR) preferences. Nevertheless, this also suggests that local indeterminacy may occur if the intratemporal income effect is not too large. While we will prove that this claim is true, expectations will be self-fulfilling only if this effect is in accordance with the households’ intertemporal choice. We will show indeed that there also exists an

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1 See also Gokan [9] for similar analysis of finance constrained economies.

2 Consumption taxation is shown however to have destabilization effects by Lloyd-Braga et al. [22] in a finance constrained economy with heterogeneous households.
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