

# **Progressive Taxation and Macroeconomic (In)stability**

**Shu-Hua Chen**

Department of Economics  
National Taipei University  
151 University Rd.  
San Shia, Taipei, 237 Taiwan, R.O.C.  
Phone: 1-886-2-8674-7168  
Fax: 1-886-2-2673-9727  
E-mail: shchen@mail.ntpu.edu.tw

and

**Jang-Ting Guo**

Department of Economics  
4123 Sproul Hall  
University of California, Riverside  
Riverside, CA 92521, U.S.A.  
Phone: 1-951-827-1588  
Fax: 1-951-827-5685  
E-mail: guojt@ucr.edu

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# Progressive Taxation and Macroeconomic (In)stability

Shu-Hua Chen and Jang-Ting Guo

## Abstract

It has been shown, as in Schmitt-Grohé and Uribe (1997, *JPE*), that an otherwise standard one-sector real business cycle (RBC) model may exhibit indeterminacy and sunspots under a balanced-budget rule that consists of fixed and “wasteful” government spending and proportional income taxation. This fiscal policy formulation resembles a regressive tax schedule whereby the household’s marginal tax rate is decreasing in its own level of income. On the contrary, it is straightforward to show that the economy *ceteris paribus* always displays saddle-path stability and equilibrium uniqueness under progressive income taxation, thus an automatic stabilizer that mitigates business cycle fluctuations. In this paper, we incorporate a progressive/regressive income tax schedule *a la* Guo and Lansing (1998, *JET*) into a prototypical one-sector RBC model with “productive” government spending, and systematically examine the interrelations between the economy’s local stability properties and the tax progressivity characterized by a single parameter. We find that the relative strength of the equilibrium government spending-to-GDP ratio (capturing the demand-side effect of public expenditures) versus the output elasticity of government spending (capturing the supply-side effect of public expenditures) plays a crucial role in determining the local dynamics around the model’s steady state. Specifically, in contrast to the existing literature, regressive income taxation may lead to saddle-path stability and equilibrium uniqueness, as in the original laissez-faire RBC model. In addition, macroeconomic instability in the form of local indeterminacy and belief-driven business cycle fluctuations may occur under progressive income taxation, thus becoming an automatic destabilizer. Finally, when the fiscal schedule is flat with a constant income tax rate, we recover Guo and Harrison’s (2008, *JPET*) result that the economy exhibits indeterminacy and sunspots when government spending generates sufficiently strong production externalities.