

# Corrigendum: Tax Policy and Stability in a Model with Sector-Specific Externalities\*

Jang-Ting Guo<sup>†</sup>  
University of California, Riverside

Sharon G. Harrison<sup>‡</sup>  
Barnard College, Columbia University

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## Abstract

This corrigendum corrects an error in Guo and Harrison (2001, *Review of Economic Dynamics* 4, pp. 75-89), and shows that all of our earlier results are qualitatively unchanged.

*Keywords:* Tax Policy, Stability, Sector-Specific Externalities.

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<sup>†</sup>Corresponding Author. Department of Economics, 4123 Sproul Hall, University of California, Riverside, CA, 92521, Phone: (951) 827-1588, Fax: (951) 827-5685, E-mail: guojt@ucr.edu.

<sup>‡</sup>Department of Economics, Barnard College, 3009 Broadway, New York, NY 10027, Phone: (212) 854-3333, Fax: (212) 854-8947, E-mail: sh411@columbia.edu.

Guo and Harrison (2001) examine the quantitative interrelations between an income tax policy and local stability of competitive equilibria within a two-sector real business cycle (RBC) model in which sufficiently strong production externalities in investment lead to equilibrium indeterminacy under *laissez faire*. Unfortunately, there is an error in our description of the household's and government's budget constraints. Since the objective of our analysis is to focus exclusively on the macroeconomic (in)stability effects of tax progressivity (governed by the parameter  $\phi$ ) and to make comparisons with those in a one-sector counterpart, we abstract from studying the potential stabilization role of public expenditures  $G_t$  on sectoral outputs. Accordingly, instead of purchasing goods and services produced by the consumption and/or investment sector(s), the government is now postulated to return all its tax revenues to households as a lump-sum transfer  $TR_t$ . It follows that the representative household's budget constraint (9) on page 79 is changed to

$$C_t + p_t I_t \leq (1 - \tau_t)(r_t K_t + w_t L_t) + TR_t. \quad (1)$$

In addition, the government's period budget constraint (16) on page 81 is given by

$$G_t + TR_t = \tau_t Y_t, \quad (2)$$

where  $G_t = 0$  since the (de)stabilizing effects of positive government purchases are left for future research; and the model's steady state (23) on page 82 now becomes

$$\frac{TR}{Y} = 1 - \eta \quad \text{and} \quad \mu = 1 - \frac{\alpha \delta \eta (1 - \phi)}{\frac{1}{\beta} - 1 + \delta}, \quad (3)$$

where time subscripts are eliminated to denote steady-state values. The steady-state expressions for the remaining variables can then be derived accordingly.

As it turns out, all of the results in Guo and Harrison (2001) remain qualitatively robust to the above modifications. The new Figure 1 shows that for every value of the investment externality  $\theta$  between 0.09 and 1 (including  $\theta_{US} = 0.108$ ) in our benchmark parameterization, a regressive tax schedule can stabilize the economy against belief-driven business cycle fluctuations because the combined consumption and price effects outweigh the investment effect. When our model economy exhibits a "low" investment externality ( $0 < \theta < 0.09$ ) or collapses to a one-sector RBC framework ( $\theta = 0$ ), indeterminacy and sunspots may arise under regressive income taxation. Although not shown here due to space limitation, these findings continue to hold in the four alternative parameterizations that are considered in our sensitivity analysis.

## References

- [1] Guo, Jang-Ting and Harrison, Sharon G. (2001). "Tax Policy and Stability in a Model with Sector-Specific Externalities," *Review of Economic Dynamics* **4**, 75-89.

Figure 1: Stability Properties of the Benchmark Parameterization ( $\sigma=1$  and  $\gamma=.25$ )

