How Does Tax Progressivity and Household Heterogeneity Affect Laffer Curves?
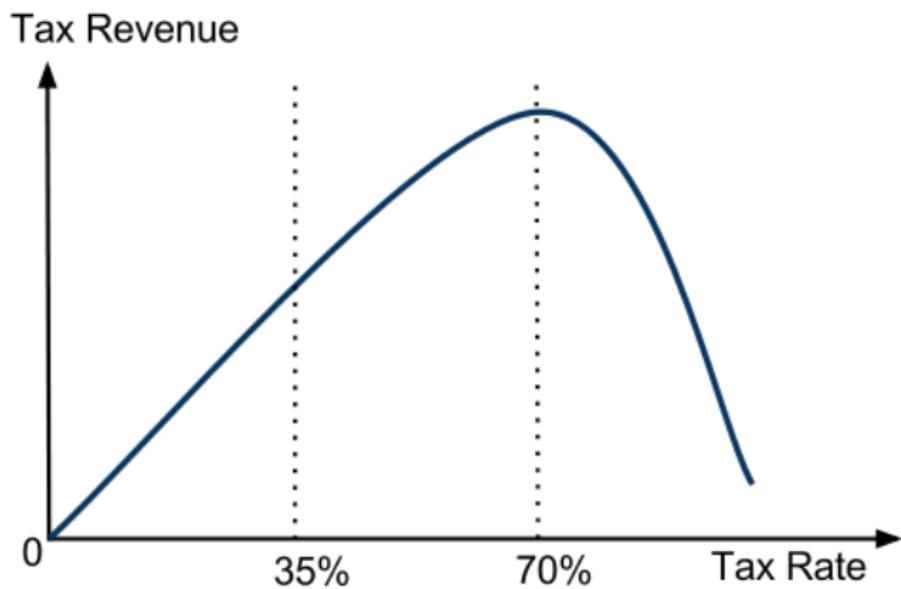
Holter, Krueger, and Stephanchuk (HKS)

(Discusion by: Hakki Yazici, Sabanci University, Istanbul)

August, 2014
8th Nordic Summer Symposium in Macroeconomics

Laffer Curve

Trabandt and Uhlig 2011

- Uses a *representative agent* model with *linear* tax on labor income to quantitatively characterize Laffer Curves for US and EU-14.

- Finds that US and EU-14 are on the desirable side of the peak of the labor Laffer curve.

- Maximum revenue gain is modest.

HKS uses a rich OLG model with many levels of heterogeneity and asks:

Q1: What does the US labor Laffer curve look like? (robustness of TU 2011 to heterogeneity and progressive taxation)

Q2: In general, how does progressivity of taxes and household heterogeneity affect Laffer curves?

Details of the analysis

- IM OLG model with exogenous household heterogeneity in family structure, initial ability of members, and ex-post heterogeneity thru idiosyncratic shocks.

- Endogenous heterogeneity in human capital (for women) and assets.

- Gov't borrows and imposes linear tax on consumption and capital income and nonlinear tax on labor income, y, with the tax function:

$$T(y) = y - \theta_0 y^{1-\theta_1},$$

to finance spending, interest payment on debt, lump-sum redistribution, and unemplyment benefits.

- θ_0 controls average taxes and θ_1 controls progressivity.

- Calibrate the model to US data.

- Labor Laffer curve: steady-state tax revenue as a function of average labor income tax holding θ_1 constant.

- At current θ_1^{US} :

  - Status quo US average labor tax (17%) is at the desirable side of the peak of the Laffer curve.

  - Revenue max'ing labor tax $\tau_n^* = 55\%$, with revenue gain 55%.

  - Similar to TU 2011 which has no progressivity and heterogeneity ($\tau_n^* = 63\%$ and revenue gain 30%).

- Both τ_n^* and max revenue gain declines with θ_1 :

  - Max revenue gain increases by 6% with a flat system and decreases by 7% under $2\theta_1^{US}$. Large?

Results - 2

- Keeping avg labor tax constant, increasing progressivity decreases revenues.

- Effects of heterogeneity:

  - Laffer curve sensitive to Frisch elasticity of labor supply, human cap. accumulation (females), extensive margin (females).

  - Laffer curve robust to ex-ante ability heterogeneity, idiosyncratic shocks, and life cycle vs infinite horizon.

Comments

- Tax function and the interpretation of θ_1 as progressivity are special?

  What if instead of increasing θ_1 we increase the tax rate of the top income bracket and decrease the rest such that average tax stays constant. Is it obvious this way of increasing progressivity also decreases tax revenue? If not, are your conclusions about how progressivity affects Laffer curves specific to this particular way of increasing progressivity?

- Revenue effects during transition? Might especially be important given your motivation of the paper, i.e., public debt crises in some developed economies.

Comments

- Increasing tax revenue increases progressivity of the tax code (not θ_1) since extra revenue is rebated lump-sum. How do you keep progressivity constant?

- You do not talk about the success of model's fit in general. Specifically, do you match observed wealth inequality? Wealth inequality especially important since you claim inequality is not important for Laffer curve.

- In the U.S. capital and labor income are jointly taxed, why separate in your analysis?

- Modeling endogenous human capital accumulation for men (in the form of education or on-the-job-training decisions) might be more accurate in terms of modeling their labor supply elasticity.

Comments

- Many simplifying demographic assumptions. Do they matter?

  Example: Household expenditures do not depend on no. of children. In reality they do, which might make the labor supply of households with many children more inelastic.

- In the US, married households are allowed to file separately. Is it obvious that allowing for that does not change your results?

  I got curious and found that in 1992, about 95% of the married filed jointly. (General Accounting Office, Income Tax Treatment of Married and Single Individuals, GAO-GGD - pages 96 -175, Washington 1996)

Comments

- Can you give us how θ_1 changes reflect themselves in terms of changes in income tax brackets? θ_1 itself is n abstract concept.