

Econ 131
Spring 2023
Emmanuel Saez

Problem Set 2

DUE DATE: FRIDAY March 24 (2 DAY EXTENSION DUE TO LATE POSTING)

Student Name:

Student ID:

GSI Name:

- **You must submit your solutions using this template.**
- **Although you may work in groups**, each student must submit individual sets of solutions. You must note the names other students that you worked with. Write their names here:

1. Working Families Tax Credit in Washington State

Read the following recent blog post discussing the new Washingtons Working Families Tax Credit Post link:

<https://www.peoplespolicyproject.org/2023/02/15/washingtons-working-families-tax-credit/>

a) What are the expected labor supply responses generated by this new Washingtons Working Families Tax Credit?

b) Suppose that the Washingtons Working Families Tax Credit is extended to children living in families with \$0 of earnings. How would this change your answer in a)?

c) Suppose that the Washingtons Working Families Tax Credit is further extended to all children (regardless of family income): \$600 for families with 1 child, \$900 for 2 children, \$1200 for 3+ children. How would this change your answer in a)?

d) Which system do you think is best: a), b), or c)? Explain briefly why.

2. True/False Statements

Determine whether each statement is true, false, or uncertain and explain why. Answers with no explanation will receive no points.

- (a) The 2013 top tax rate increase in the United States led to a surge in reported top incomes in 2012 implying that the rich can easily avoid higher taxes.
- (b) Under the new Trump 2017 corporate tax reform, thanks to the minimum tax on foreign profits, US multinational corporations have no incentives to shift profits to tax havens anymore.

- (c) The top income tax rate decrease of 1986-1988 in the United States was a supply-side success because it led to a huge increase in pre-tax incomes reported by the top 1%.
- (d) Denmark has a very progressive tax system but can still attract top talent from abroad by offering tax discounts on highly skilled immigrants. Therefore, mobility of top talent does not threaten tax progressivity.

3. Capital Income and Savings Taxation (15 points)

Consider a 2 period model where individuals earn labor income $Y = 300$ from working in period 1 and do not work in period 2 (retirement). Individuals choose how much to consume in each period. Savings in period 1 earn an interest rate $r = 30\%$. Let C_1 denote consumption in period 1 and C_2 denote consumption in period 2. Suppose that individuals have a utility function $U = C_1 C_2$.

- (a) Set up the individual's lifetime utility maximization problem and solve for the optimal C_1 , C_2 , and S in an economy without taxes. (2 points)

- (b) Now assume that a tax $\tau = 50\%$ is imposed **only** on savings income. Find the optimal C_1 , C_2 , and S . (2 points)

- (c) Compare the ratio of consumption C_2/C_1 in (a) and (b). Does the tax distort consumption choices? If yes, imagine the government can force individuals to save (imagine a compulsory pension plan) which level of savings should the government impose to restore pre-tax consumption choices (i.e. the ratio of C_2/C_1 under no taxes)? *(2 points)*
- (d) Explain how the income and substitution effects affect consumption choices in the two periods. *(2 points)*
- (e) How much revenue does the government collect from each individual under the tax system described in (b)? *(1 point)*

Suppose now that the government is considering switching to a system where instead the labor income is taxed.

- (f) Find the labor income tax τ_L that would raise as much revenue as is collected under the capital income tax system. *(1 point)*

- (g) Find the optimal C_1 , C_2 , and S . *(2 point)*

- (h) Compare the ratio of consumption C_2/C_1 in (a) and (f). Does the labor income tax distort consumption choices? *(1 point)*

Consider now that individuals have the opportunity of declaring their labor income as savings income.

- (i) What kind of tax system (i.e. one that taxes only capital income, one that taxes only labor income, or one that taxes both) would the government choose in order to raise a certain amount of revenue while minimizing the distortion to intertemporal consumption choices? If it's a mixed system (i.e with both capital and labor taxes), how would the two tax rates compare? Explain **in 5 sentences or less**. *(2 points)*