

Econ 131
Spring 2021
Emmanuel Saez

Problem Set 2

DUE DATE: March 31

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. Essay

Read the following recent New York Times article discussing policies supporting single mothers. Write a short essay [the essay has to fit in the page below] about the article in light of welfare reform and its impact on single mothers' labor supply that we discussed in class.

Washington Post link:

<https://eml.berkeley.edu/~saez/course131/articleps2.pdf>

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) A wealth tax as recently proposed by Senator Elizabeth Warren make the US tax system progressive up to the very top.

- (b) The new COVID bill just enacted makes the Child Tax Credit fully refundable. Therefore, it is going to discourage low income parents from working.

- (c) Inheritances taxes are undesirable if people's motive for accumulating wealth is about leaving bequests to their children.

(d) People think that the ideal distribution of wealth should be unrealistically equal.

(e) If wealth comes primarily from life-cycle savings, there should be no tax on capital income.

(f) In the modern globalized world, taxing corporations has become impossible. That's why countries have lowered their corporate tax rates over time.

3. Capital Income and Savings Taxation

Consider a novel type of Cryptocurrency named *Fixed Coin*, which can potentially be taxed. *Fixed Coin* is riskless, offers 40% interest rate per period, and it is the only savings instrument available to *Crypto Land's* residents. Consider a 2 period model where individuals earn labor income $Y = 100$ from working in period 1 and do not work in period 2 (retirement). Individuals choose how much to consume in each period. Let C_1 denote consumption in period 1 and C_2 denote consumption in period 2. Suppose that individuals have a utility function $U = \ln C_1 + \ln C_2$.

- (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.

Now assume that a comprehensive income tax $\tau = 20\%$ is imposed on both labor and savings income.

(b) Find the optimal C_1 , C_2 , and S .

(c) Compare the ratio of consumption C_2/C_1 in (a) and (b). Does the comprehensive income tax distort consumption choices?

(d) The substitution effect from the savings taxation should decrease the C_2/C_1 ratio. Explain which effect dominates (income or substitution) in (a) vs (b).

- (e) How much revenue does the government collect from each individual under the comprehensive income tax system?

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

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

(g) Find the optimal C_1 , C_2 , and S .

(h) Compare the ratio of consumption C_2/C_1 in (a) and (f). Does the Labor income tax distort consumption choices?

Consider now that individuals have the opportunity of shifting half of their labor income into savings income.

- (i) How much revenue would be collected from each individual under the labor income taxation system?

- (j) Under this scenario which tax system would collect more revenue? Explain.