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 Washington Post article discussing wealth taxation using the example of Switzerland. Write a short essay [the essay has to fit in the page below] discussing whether the arguments made seem plausible in light of what we discussed in class.

Washington Post link:
https://eml.berkeley.edu/~saez/course131/wapops2.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) Taxing wealth is unfair because people already paid income tax on the money they made to accumulate wealth.

(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) Inheritances taxes are desirable if people’s motive for accumulating wealth is not about leaving bequests to their children.
(d) Evidence from the Israeli Kibbutz implies that redistribution does not hurt people’s incentives to work.

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

(f) Tax havens lower taxes on the rich.
3. Taxation of Inheritances

Consider a representative individual from generation $t$ that lives for one period $t$ and whose utility function is given by

$$U(C_t, l_t, b_t) = \ln(C_t) + \ln(L - l_t) + \frac{\ln(b_t)}{2}$$

Where $C_t$ is her consumption level, $L$ is her maximum number of units of labor available, $l_t$ represents her lifetime labor supplied and $b_t$ represents the net-of-tax bequests left to her only child who will live in period $t + 1$. The individual living in period $t$ faces the following budget constraint:

$$b_t = (wl_t - C_t + b_{t-1})R$$

In other words, the bequest she leaves for her child is equal to her lifetime labor income, minus her total consumption plus the initial wealth she had at the start of her life, all that multiplied by $R$ which is a rate that tells us by how much she is able to augment her savings throughout her life.

(a) Set up and solve the utility maximization problem for an individual from the first generation to show that the optimal consumption, labor and net-of-tax bequests for the first generation are $C_1 = \frac{2}{5} (Lw + b_0)$, $l_1 = \frac{3}{5}L - \frac{2}{5} \frac{w}{w}$ and $b_1 = \frac{R}{5} (Lw + b_0)$, respectively.

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1 Which is nothing but the bequest she got from her parent.

2 Another way to read this problem is thinking of each $t$ as a period of $L$ years, where each individual can choose the number of years she works ($l_t$), the total consumption for the $L$ years ($C_t$) and the bequest left at the $L$ year $b_t$. Here $w$ could be interpreted as the annual wage rate and $R$ would be equivalent to $(1 + r)^L$, where $r$ represents an approximation of the annual interest rate.

3 For this part and for the remaining of this math problem assume that all the solutions are interior, that is, there is no need to check for corner solutions.
(b) Consider now an individual from the second generation whose initial wealth is given by the bequest left by the individual from generation 1. Find the optimal $C_2$, $l_2$, and $b_2$ as functions of the parameters $w$ and $R$ and the initial wealth of the first generation $b_0$ [Hint: You don’t have to solve the maximization problem again].
Suppose now that the government decides to introduce an estate tax of 40% on all the bequests. The tax is unanticipated and is introduced at the end of period one, after the before-tax bequest of the first generation has been determined. The tax applies to the bequests of the first generation and will also be applied to the subsequent generations.

(c) Find the optimal consumption level, labor supply and the net-of-tax bequests left by individuals in generation 1 and generation 2 under this scenario.

(d) Compare your answers in (c) to the optimal values in (a) and (b), Did anything change? What is the intuition behind these changes?
In the same setting as before, suppose now that 100 individuals are born each period. Again, each individual has only one child. All individuals have a maximum of $L = 80$ units of labor available. In period 1 there are three types of individuals: There is 1 super wealthy individual ($SW$) whose initial wealth $b_{0,SW}$ is equal to $6,000$ and 9 wealthy ($W$) individuals with $b_{0,SW} = 600$. Everyone else has an initial wealth $b_{0,E} = 40$. We’ll also assume that the super wealthy individual and her offspring have constant wage rate $w_{SW} = 400$ and “return” rate $R_{SW} = 10$, while the wealthy and her offspring have $w_{W} = 50$ and “return” rate $R_{W} = 4$. Finally, the rest of the people and their offspring face $w_{E} = 10$ and $R_{E} = 1.5$.\footnote{The “return” rates of 10, 4 and 1.5 are associated with “annual” interest rates of approximately 3%, 1.8% and 0.5%, respectively.}

(e) For the first generation, calculate the share of the total initial wealth that is inherited by the top 1%, the top 10% and the share that is held by the bottom 90% at the beginning of the first generation. How far are this numbers from the ones found by Saez and Zucman ’16 for the US in 2016 (Covered in lecture)?

(f) Using the results you found in (a), calculate the labor supply and lifetime labor income for each type of individual in the first generation.
(g) From the previous results, calculate the share of the lifetime labor income that was earned by the top 1%, the top 10% and the share that was earned by the bottom 90%. How far are these numbers from the ones found by Saez and Zucman ’19 and Piketty, Saez, and Zucman ’18 for the US by 2017 (Covered in lecture)?

(h) Using the results you found in (a), calculate the bequest that each type of individual from the first generation would leave to her child in a world without taxation. Using these results, compute the share of the total initial wealth for the second generation that is inherited by the top 1%, the top 10% and the share that is held by the bottom 90% at the beginning of the period 2.
(i) As in (c), suppose that the government introduces a estate tax of 40% on the bequests left by the super wealthy of the first generation. Assume also that the revenue collected from that policy is distributed in equal parts among the 100 individuals at the start of period 2. Compute the new share of the total initial wealth for the second generation that is held by the top 1%, the top 10% and the share that is held by the bottom 90%.

(j) Compare the results from (h) and (i) to the results in (e). From the evidence seen in class, which situation (between (h) and (i) ) Americans seem to prefer?